NEW APPLICATION

ORIGINAL

RECEIVED

2004 DEC 14 P 4:08

AZ CORP COMMISSION
DOCUMENT CONTROL

Arizona Corporation Commission
DOCKETED

DEC 14 2004

DOCKETED BY

FENNEMORE CRAIG
A Professional Corporation
Jay L. Shapiro (No. 014650)
3003 North Central Avenue
Suite 2600
Phoenix, Arizona 85012
Telephone (602) 916-5000

Attorneys for Johnson Utilities Company

WS-02987A-04-0889

BEFORE THE ARIZONA CORPORATION COMMISSION

IN THE MATTER OF THE APPLICATION OF JOHNSON UTILITIES COMPANY FOR AN EXTENSION OF ITS EXISTING CERTIFICATE OF CONVENIENCE AND NECESSITY FOR WASTEWATER SERVICE.	DOCKET NO. WS-02987A- **APPLICATION FOR EXTENSION OF CERTIFICATE OF CONVENIENCE AND NECESSITY**

Johnson Utilities, L.L.C. dba Johnson Utilities Company ("Applicant"), an Arizona public service corporation, hereby applies for an Order approving an extension of its existing Certificate of Convenience and Necessity ("CC&N") for wastewater service to include an area encompassing four residential developments ("the Developments") known as Wayne Ranch, Vineyard Estates, Milagro and Taylor Ranch, respectively. In support of this Application, Applicant states as follows:

1. Applicant is a public service corporation engaged in providing water and wastewater utility service for public purposes within portions of Pinal County, Arizona. Applicant was first granted a CC&N in Decision No. 60223 (May 27, 1997), and currently serves approximately 8500 wastewater utility customers. The area served by Applicant contains both residential and commercial properties.

2. Richmond-American Homes of Arizona, Inc. and WR Development, LLC (Wayne Ranch), Vineyard Holdings, LLC (Vineyard Estates), Milagro Investors, LLC (Milagro)[1] and Pulte Homes Corporation (Taylor Ranch) have all individually requested that Applicant extend wastewater utility service to the Developments, each generally located within Section 17,

[1] Project formerly known as "Westbrook" developed by Century Pacific Homes of Arizona, Inc.

Township 2 South, Range 8 East in Pinal County, Arizona. Copies of individual requests for wastewater utility service are attached hereto as Exhibit 1.

3. Vineyard Holdings, LLC (Vineyard Estates) did not formally request wastewater service from Applicant in writing. Prior to their requests to Applicant, the developers of both Wayne Ranch and Vineyard Estates negotiated to receive wastewater service from Arizona Utility Supply & Service Company, LLC ("AUSS") upon a successful extension of AUSS' CC&N. However, AUSS has subsequently defaulted on its previous commitments to these developers, which is, in part, the subject of separate matters currently pending before the Commission. *See* Docket Nos. SW-04002A-02-0837, WS-02987A-02-0837, SW-04002A-04-0465, WS-02987A-04-0465.

4. The area covered by this Application includes approximately 309.55 acres, and will ultimately contain approximately 1,129 lots (Wayne Ranch = 423 lots/115 acres, Vineyard Estates = 161 lots/39 acres, Milagro = 140 lots/37.35 acres, Taylor Ranch = 405 lots/118.2 acres).

5. A legal description for each of the individual areas covered by this Application is attached hereto as Exhibit 2. However, Applicant is requesting the entirety of Section 17, Township 2 South, Range 8 East in Pinal County, Arizona. This will allow JUC to master plan for wastewater utility service to this area, which area AUSS had intended to extend service into before filing for Chapter 7 bankruptcy protection. Such master planning will allow JUC and the developers and landowners in the area to achieve economy of scale wherever possible.

6. Applicant's management contact is Brian Tompsett of Johnson Utilities Company, whose business address is 5230 East Shea Boulevard, Suite 200, Scottsdale, Arizona 85254. The telephone number is (480) 998-3300.

7. Applicant's operator, certified by the Arizona Department of Environmental Quality, is Jerry Beeler, whose business address is 968 E. Hunt Hwy, Queen Creek, Arizona. The telephone number is (480) 987-9870.

8. Applicant's attorneys are Fennemore Craig, whose address is 3003 North Central

Avenue, Suite 2600, Phoenix, Arizona 85012-2913. The individual attorney responsible for this application is Jay L. Shapiro. Mr. Shapiro's telephone number is (602) 916-5366. **All Data Requests or other Requests for Information should be directed to Mr. Brian Tompsett, with a copy to Mr. Shapiro's attention, on behalf of Johnson Utilities Company**.

9. A Certificate of Good Standing for Johnson Utilities Company is attached hereto as Exhibit 3.

10. The newly acquired customers in the area covered by this application will receive wastewater service subject to Applicant's current rates and charges for utility service, which were approved in Decision No. 60223 (May 27, 1997).

11. A detailed map indicating portions of Applicant's present CC&N, pending extension requests and the area requested for by this Application is attached hereto as Exhibit 4.

12. Applicant's balance sheet and profit and loss information for the 12-month period ending 2003 is attached hereto as Exhibit 5.

13. A copy of a master wastewater design report for each individual development is attached hereto as Exhibit 6.

14. A copy of Applicant's most recent Annual Report (2003) is attached hereto as Exhibit 7.

15. The estimated aggregate numbers of customers to be served in the Developments, in each of the first five years of wastewater utility service, is as follows:

Residential

1st Year:	333
2nd Year:	829
3rd Year:	1072
4th Year:	1129
5th Year:	1129

16. Applicant's estimated aggregate annual operating revenue and operating expenses for each of the first five years of operation in the new area covered by this Application are as

follows:

Operating Revenue	Operating Expenses
1st Year - $78,030	1st Year - $62,490
2nd Year - $261,500	2nd Year - $174,189
3rd Year - $420,654	3rd Year - $255,688
4th Year - $486,969	4th Year - $291,540
5th Year - $499,568	5th Year - $300,189

17. The aggregate plant cost projections, including service meters, by year for the next five (5) years is as follows:

Plant Cost Projection

1st Year - $1,819,429
2nd Year - $2,121,024
3rd Year - $2,121,024
4th Year - $2,121,024
5th Year - $2,121,024

18. The wastewater facilities needed to serve the area covered by this Application will be constructed as needed to provide service to customers. The construction of the additional utility facilities needed to serve the area covered by this Application will be financed primarily by advances in aid of construction and hook-up fees in accordance with Commission regulations and Applicant's applicable tariffs, as well as pursuant to the terms of any main extension agreement between Applicant and each of the four developers/builders.

19. Applicant is in the process of amending its Pinal County franchise to include the Developments. A copy of the executed franchise agreement will be filed when received in support of this application.

20. Arizona Department of Environmental Quality ("ADEQ") Approvals to Construct concerning facilities to serve the requested extension area will be provided to the Commission as soon as Applicant receives these documents. However, attached hereto as Exhibit 8 is the Approval of Construction already issued for Vineyard Estates.

21. Notice of this Application will be given by publication in a newspaper of general circulation as required by the Commission. Proof of publication will be filed with the Commission.

22. Applicant maintains that this Application is in the public interest and should be granted. There is a present need for wastewater service in order to foster orderly growth in Pinal County, as evidenced by the landowners' and developer's requests that Applicant extend wastewater utility service.

23. To the best of its knowledge and belief, Applicant is currently in compliance with all regulatory requirements applicable to its provision of wastewater utility service in Arizona, including all applicable orders, rules and regulations of the Commission and ADEQ.

WHEREFORE, Applicant respectfully requests the following:

A. That the Commission proceed to consider and act upon this Application as timely as possible and to schedule a hearing, if necessary, on this matter;

B. That upon completion of said hearing that the Commission enter an Order approving the extension of Johnson Utilities Company's current Certificate of Convenience and Necessities to include the additional geographic areas requested by this Application as shown in Exhibit 4; and

C. That the Commission grant such other and further relief as may be appropriate under the circumstances herein.

DATED this 14th day of December, 2004.

FENNEMORE CRAIG, P.C.

By: _____
Jay L. Shapiro
Attorneys for Johnson Utilities Company

ORIGINAL and 15 copies delivered this
14th day of December, 2004, to:

Docket Control
Arizona Corporation Commission
1200 West Washington Street
Phoenix, Arizona 85007

COPY hand-delivered this 14th day of December, 2004:

Jim Fisher, Executive Consultant
Utilities Division
Arizona Corporation Commission
1200 West Washington Street
Phoenix, Arizona 85007

By: _____
1614009.1/51239.009

EXHIBIT 1

REQUESTS FOR SERVICE

Century Pacific Homes of Arizona, Inc.

RECEIVED JUL 01 2004

3760 Highland Drive, Suite 505
Salt Lake City, UT 84106

Phone 801.273.3350
Fax 801.273.3453

June 23, 2004

Brian Tompsett
Johnson Utilities
5230 E. Shea Blvd.
Scottsdale, AZ 85254

Re: Request for Sewer Service for Tax Parcel Number 104-24-008
Parcel 6, Sun Valley Farms Unit II, Section 17, Township 2 South, Range 8 East, of the Gila and Alt River Base and Meridian, Pinal County, Arozona, according to Book 1 of Surveys, page 33, records of Pinal County, AZ.

Dear Mr. Tompsett,

This letter is to request sewer service for the parcel referenced above.

Regards,

Linda W. Luther

Linda W. Luther
President

-- cc: Roger Heywood

Pulte Homes

Johnson Utilities
Attn: Brian Tompsett
5230 E. Shea Blvd.
Scottsdale, AZ 85254

RE: Taylor Ranch

Brian,

Please consider this letter a formal request to include Taylor Ranch in the expansion of the wastewater service area for Johnson Utilities. Taylor Ranch is located in Section 17, Township 2 South, Range 8 East in Pinal County. Specifically it is located at the northeast corner of Ocotillo Road and Gantzel Road (Ironwood Road). The site consists of 118.2 acres with a proposed lot yield of 395 units. Our estimated date for sewer service is April of 2005.

I have enclosed a site plan of Taylor Ranch that includes some site data. If you need anything further to facilitate the inclusion into the expanded service area please do not hesitate to contact me.

Thank you,

Chris Clonts
Project Manager

15333 N. Pima Road, Suite 300
Scottsdale, Arizona 85260
480-598-2100 480-391-6100 (Fax)

RICHMOND AMERICAN HOMES

June 11, 2004

TRANSMITTED VIA FAX – HARD COPY MAILED

Brian P. Tompsett, P.E.
Executive Vice President
Johnson International, Inc.
5230 E. Shea Blvd.
Scottsdale, Arizona 85254

Re: Wayne Ranch – Lots 14-22 and 169-423
Request for Sewer Service

Dear Mr. Tompsett:

Richmond American Homes of Arizona, Inc. (Richmond) has purchased the above referenced lots from Del Pueblo Homes. Del Pueblo had originally executed a Sewer Collection Main Extension Agreement with Arizona Utility Supply & Service Company, LLC (AUSS), dated October 3, 2003. Under this Agreement, AUSS was to provide sewer service to 423 lots at the Wayne Ranch subdivision, including the 264 lots purchased by Richmond. Richmond was to be an assignee to the AUSS/Del Pueblo Agreement in accordance with Paragraph 14 therein. Richmond has closed on the property and intends to initiate sales in August 2004.

The Agreement envisioned treatment of the sewage generated from Wayne Ranch at the Pecan Water Reclamation Plant under a separate agreement between AUSS and Johnson Utilities. The agreement required payment of a $1,500 per lot Sewer Capacity Charge. Richmond understands that $500 of this fee ($132,000 total) has been paid to AUSS by Del Pueblo (reflected in our purchase price) and used, at least in part, to construct the off-site collection system from Wayne Ranch to the Pecan plant. The remaining $1,000 per lot was to be paid to AUSS at such time as building permits were pulled from Pinal County.

AUSS filed an application for an extension of its Certificate of Convenience and Necessity (CC&N) on August 27, 2003 with the Arizona Corporation Commission (ACC) for all lands within Section 17, including the entirety of Wayne Ranch. AUSS withdrew that application on March 17, 2004. Consequently, there is no sewer provider for Wayne Ranch.

With this letter, Richmond is formally requesting sewer service from Johnson Utilities (Johnson) for lots 14 through 22 and 169 through 423 of Wayne Ranch.

We believe service by Johnson can be accommodated within the infrastructure planned to provide sewer service to Wayne Ranch. The off-site collection system is complete and was funded by the area developments, including Wayne Ranch. Johnson is the entity that ultimately was to provide treatment and disposal of the sewage collected from the project.

Our understanding of the $1,000 per lot remaining Sewer Capacity Charge was that it was to be forwarded to Johnson for capacity at the Pecan plant. This fee is consistent with Johnson's approved tariff for wastewater service. Richmond is willing to pay such fees to Johnson at the time of building permits, consistent with your ACC approved tariff and the AUSS/Del Pueblo Agreement.

Please take the appropriate steps necessary to initiate service to Wayne Ranch at the earliest possible time. As stated above, it is our intent to initiate sales in August.

Thank you for your willingness to assist Richmond in developing the project. Please contact me at (602) 522-4771 if you have any questions regarding this request, or need additional information to move the process forward.

Respectfully Submitted,
Richmond American Homes of Arizona, Inc.

Chris Lindahl
Director of Forward Planning

EXHIBIT 2

LEGAL DESCRIPTIONS

Legal Description

[Area Requested for Application]

Section 17, Township 2 South, Range 8 East in Pinal County, Arizona.

MILAGRO

Legal Description
Parcel 6

Parcel 6, Sun Valley Farms Unit II, Section 17, Township 2 South, Range 8 East of the Gila and Salt River Base and Meridian, Pinal County, Arizona, according to Book 1 of Surveys, Page 33, Records of Pinal County, Arizona, further described as follows:

Commencing at a Brass Cap in Handhole at the Southeast corner of Section 17, Township 2 South, Range 8 East of the Gila and Salt River Base and Meridian, Maricopa County, Arizona from which a 1½" Iron Pipe at the Northeast Corner of said Section 17 bears North 00 degrees 01 minutes 11 seconds West, a distance of 5283.14 feet;

Thence North 00 degrees 01 minutes 11 seconds West, a distance of 2227.25 feet to the South line of the aforementioned Parcel 6;

Thence South 89 degrees 44 minutes 01 seconds West, along the South line a distance of 1309.97 feet;

Thence North 00 degrees 01 minutes 17 seconds West, along the West line Parcel 6 a distance of 1241.85 feet;

Thence North 89 degrees 54 minutes 23 seconds East, along the North line Parcel 6 a distance of 1310.00 feet; to the East line of the Northeast Quarter of said Section 17;

Thence South 00 degrees 01 minutes 11 seconds East, along the East line of the Northeast Quarter of said Section 17, a distance of 823.87 feet to the East Quarter Corner;

Thence continuing South 00 degrees 01 minutes 11 seconds East, along the East line of the Southeast Quarter of said Section 17, a distance of 414.03 feet; to the **POINT OF BEGINNING;**

Encompassing 1,624,209 square feet or 37.287 acres, more or less.

Any modification to or omission from this description completely absolves the surveyor from any liability for this description.

TAYLOR RANCH

A PARCEL OF LAND LOCATED IN SECTION 17, TOWNSHIP 2 SOUCH, RANGE 8 EAST, OF THE GILA AND SALT RIVER BASE AND MERIDIAN, PINAL COUNTY, ARIZONA, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT A BRASS CAP MONUMENT IN HAND HOLE MAKING THE SOUTHWEST CORNER OF SECTION 17; THENCE N 00°01'33" W 1022.76 FEET, ALONG THE WEST LINE OF THE SOUTHWEST QUARTER OF SAID SECTION 17, TO A P.K. NAIL WITH WASHER MARKING THE SOUTHWEST CORNER OF LOT 10, SUN VALLEY FARMS UNIT II AND THE POINT OF BEGINNING; THENCE CONTINUING ALONG SAID WEST LINE N 00°01"03" W 1617.53 FEET, TO AN IRON ROD IN POT HOLE MARKING THE WEST QUARTER CORNER OF SAID SECTION 17; THENCE N 00°00'39" E 931.41 FEET ALONG THE WEST LINE OF THE NORTHWEST QUARTER OF SAID SECTION 17, TO A POINT MARKING THE NORTHWEST CORNER OF PARCEL "D", SUN VALLEY FARMS UNIT II; THENCE S 86°19'09" E 1375.35 FEET ALONG THE NORTHERLY BOUNDARY LINE OF SAID PARCEL "D", TO A POINT; THENCE N 89°58'33" E 1291.49 FEET ALONG THE NORTHERLY BOUNDARY LINE OF PARCEL "D" AND LOT 8, SUN VALLEY FARMS UNIT II, TO A POINT MARKING THE NORTHEAST CORNER OF SAID LOT 8; THENCE S 00°00'49" E 1247.33 FEET, ALONG THE EAST BOUNDARRY LINE OF SAID LOT 8, TO A POINT MARKING THE SOUTHEAST CORNER THEREOF; THENCE S 89°40'42" W 1301.19 FEET ALONG THE SOUTH BOUNDARY LINE OF SAID LOT 8, TO THE SOUTHWEST CORNER THEREOF; THENCE S 00°08'04" W 1198.47 FEET ALONG THE EAST BOUNDARY LINE OF SAID LOT 10, TOA 1.5" IRON ROD MARKING THE SOUTHEAST CORNER THEREOF; THENCE S 89°40'36" W 1360.01 FEET, TO THE POINT OF BEGINNING.

CONTAINING 5,035,140 SQUARE FEET OR 115.591 ACRES, MORE OR LESS.

VINEYARD ESTATES

EXHIBIT A

All of Parcel 13 of Sun Valley Farms Unit II, Recorded in Book 1, Page 33, Section 17, Township South, Range 8 East, of the Gila and Salt River Base and Meridian, Pinal County, Arizona

WAYNE RANCH

PARCEL 1:
PARCEL 7, OF PLAT OF SURVEY OF SUN VALLEY FARMS UNIT II, BEING SITUATE IN SECTION 17, TOWNSHIP 2 SOUTH, RANGE 8 EAST, OF THE GILA AND SALT RIVER BASE AND MERIDIAN, PINAL COUNTY, ARIZONA, AS RECORDED IN RESULT OF SURVEY, IN BOOK 1 OF SURVEYS, PAGE 33, RECORDS OF PINAL COUNTY, ARIZONA.

PARCEL 2:
INTENTIONALLY DELETED

PARCEL 3:
PARCEL 15, OF PLAT OF SURVEY OF SUN VALLEY FARMS UNIT II, BEING SITUATE IN SECTION 17, TOWNSHIP 2 SOUTH, RANGE 8 EAST, OF THE GILA AND SALT RIVER BASE AND MERIDIAN, PINAL COUNTY, ARIZONA, AS RECORDED IN RESULT OF SURVEY, IN BOOK 1 OF SURVEYS, PAGE 33, RECORDS OF PINAL COUNTY, ARIZONA.

PARCEL 4:
PARCEL 14, OF PLAT OF SURVEY OF SUN VALLEY FARMS UNIT II, BEING SITUATE IN SECTION 17, TOWNSHIP 2 SOUTH, RANGE 8 EAST, OF THE GILA AND SALT RIVER BASE AND MERIDIAN, PINAL COUNTY, ARIZONA, AS RECORDED IN RESULT OF SURVEY, IN BOOK 1 OF SURVEYS, PAGE 33, RECORDS OF PINAL COUNTY, ARIZONA.

EXCEPT THAT PORTION THAT FOLLOWS:

PARCEL A, OF PLAT OF SURVEY OF SUN VALLEY FARMS UNIT II, BEING SITUATE IN SECTION 17, TOWNSHIP 2 SOUTH, RANGE 8 EAST, OF THE GILA AND SALT RIVER BASE AND MERIDIAN, PINAL COUNTY, ARIZONA, AS RECORDED IN RESULT OF SURVEY, IN BOOK 1 OF SURVEYS, PAGE 33, RECORDS OF PINAL COUNTY, ARIZONA.

SETBACK & ZONING

SUBJECT AREA IS ZONED PAD.

	ZONING DISTRICT	FRONT	SIDE	REAR

EXHIBIT 3

CERTIFICATE OF GOOD STANDING

STATE OF ARIZONA

Office of the
CORPORATION COMMISSION

CERTIFICATE OF GOOD STANDING

To all to whom these presents shall come, greeting:

I, Brian C. McNeil, Executive Secretary of the Arizona Corporation Commission, do hereby certify that

******JOHNSON UTILITIES, L.L.C.******

a domestic limited liability company organized under the laws of the State of Arizona, did organize on the 5th day of June 1997.

I further certify that according to the records of the Arizona Corporation Commission, as of the date set forth hereunder, the said limited liability company is not administratively dissolved for failure to comply with the provisions of A.R.S. section 29-601 et seq., the Arizona Limited Liability Company Act; and that the said limited liability company has not filed Articles of Termination as of the date of this certificate.

This certificate relates only to the legal existence of the above named entity as of the date issued. This certificate is not to be construed as an endorsement, recommendation, or notice of approval of the entity's condition or business activities and practices.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official seal of the Arizona Corporation Commission. Done at Phoenix, the Capital, this 1st Day of December, 2004, A. D.

SEAL OF THE ARIZONA CORPORATION COMMISSION
DITAT DEUS
1912

Executive Secretary

By

EXHIBIT 4

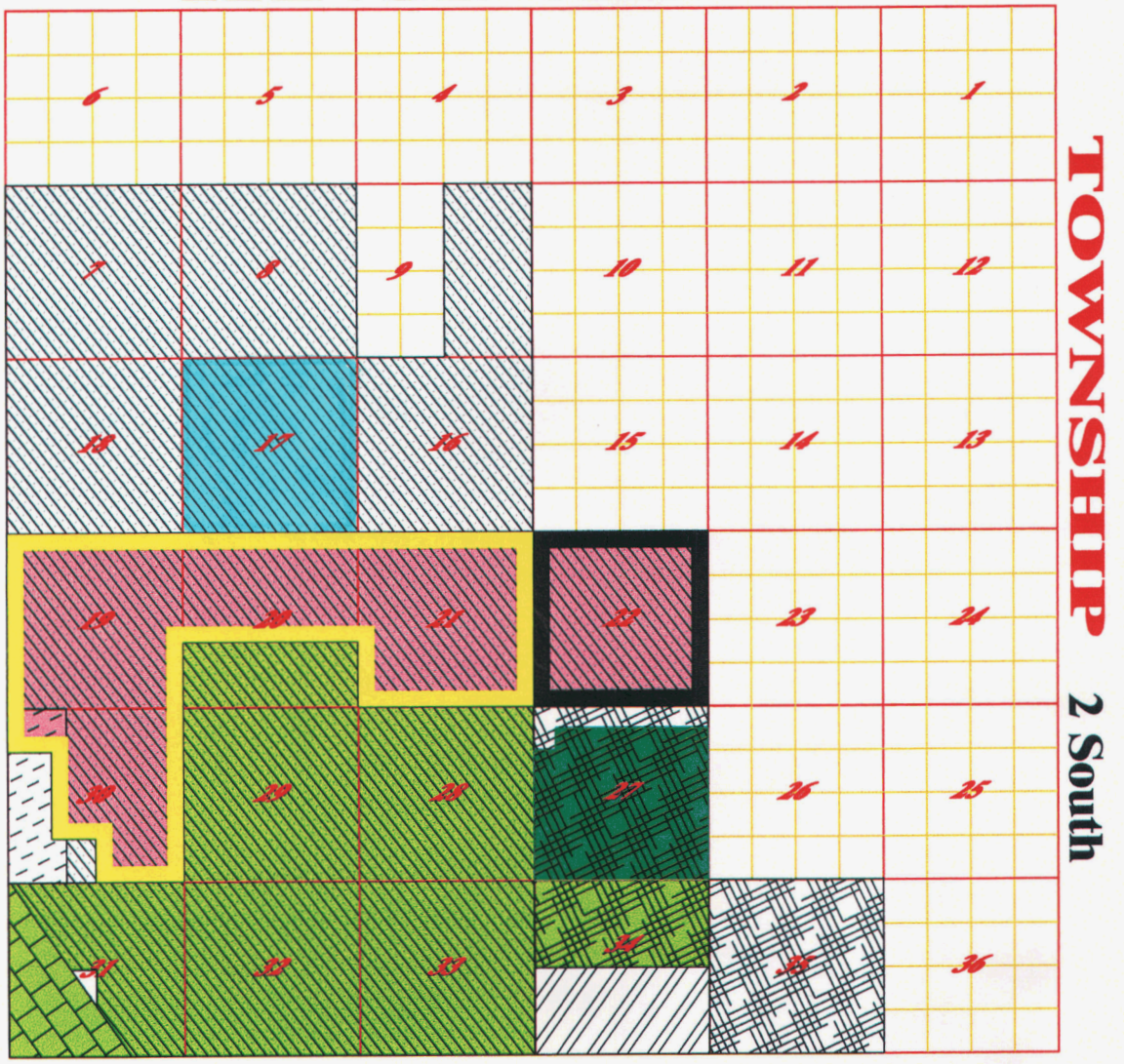
MAP

Map No. 6

Application for
Extension - Wastewater

COUNTY: *Pinal*

RANGE 8 East



TOWNSHIP 2 South

WS-2987 (6) Sewer
Johnson Utilities Company

Sewer SW-4002 (1)
Arizona Utility Supply & Services, LLC

W-2859 (3)
Diversified Water Utilities, Inc.

W-2234 (2)
H_2O, Inc.

W-1395 (2)
Queen Creek Water Company

W-2425 (2)
Sun Valley Farms Unit VI Water Company

Arizona Utility Supply & Services
Docket No. SW-4002-02-837
Application to Transfer to Johnson Utilities
Docket No. WS-2987-02-837

Arizona Utility Supply & Services
Docket No. SW-4002-04-465
Application to Transfer to Johnson Utilities
Docket No. WS-2987-04-465

Johnson Utilities Company
Docket No. WS-2987-04-501
Application for Extension for Sewer

TR2S8E 22 APR 2003

EXHIBIT 5

BALANCE SHEET AND STATEMENT OF INCOME

Johnson Utilities, L.L.C.
Balance Sheet
December 31, 2003

ASSETS	
Utility Plant	
Plant in Service	$ 40,382,861
Less: Accumulated Depreciation	(2,046,608)
Net Utility Plant in Service	$ 38,336,253
Construction Work in Progress	6,899,861
Net Utility Plant	$ 45,236,114
Current Assets	
Cash	$ 684,314
Accounts Receivable	1,476,030
Other Receivables	38,000
Total Current Assets	$ 2,198,344
Other Assets	
Deferred Legal Fees	$ 553,533
Land Held For Investment	70,257
Deposit	12,670
Total Other Assets	$ 636,460
Total Assets	$ 48,070,918
MEMBER'S CAPITAL & LIABILITIES	
Member's Capital	$ 5,447,979
Contributions in Aid of Construction	$ 20,149,882
Long-Term Debt	$ 807,000
Current Liabilities	
Accounts Payable	$ 423,801
Current Portion of Advances in Aid of Construction	138,000
Due to Member	715,823
Customer Deposits	45,940
Accrued Taxes	175,974
Accrued Interest	7,040
Total Current Liabilities	$ 1,506,578
Deferred Liabilities	
Advances in Aid of Construction, Less Current Portion	$ 20,159,479
Total Member's Capital & Liabilities	$ 48,070,918

See Accountants' Compilation Report

Johnson Utilities, L.L.C.
Statement of Income
December 31, 2003

Operating Revenue	
Water Sales	$ 3,919,316
Sewer Fees	1,237,464
Other Revenue	101,170
Total Revenue	$ 5,257,950
Operating Expenses	
Purchased Water	$ 222,808
Purchased Power	291,396
Repairs & Maintenance	12,099
Outside Services	1,203,322
Water Testing	52,163
Rents	117,648
Transportation	557
Insurance	28,964
Sludge Removal	2,685
Miscellaneous Operating Expense	41,641
Depreciation and Amortization	419,049
Taxes Other Than Income	2,089
Property Taxes	71,731
Total Operating Expenses	$ 2,466,152
Net Operating Income	$ 2,791,798
Other Income (Expenses)	
Interest Income	$ 18,662
Interest Expense	(79,211)
Total Other Income (Expenses)	$ (60,549)
Net Income	$ 2,731,249

See Accountants' Compilation Report

EXHIBIT 6

MASTER WASTEWATER DESIGN REPORTS

VINEYARD ESTATES

Wastewater Collection Master Plan
for
Vineyard Estates

Prepared by Otak, Inc.
502 S. College Ave., Suite 204
Tempe, AZ 85281
(480) 557-6670

November 2002

Otak Project No. 11678

KENNETH A. NELSON, P.E.

Table of Contents
Vineyard Estates

Existing Conditions

The proposed Vineyard Estates Development is on approximately 39 acres located in the center south half of Section 17, T2S, R8E. It is adjacent to Ocotillo Road on the South and located between existing Ironwood Road to the West and existing Kenworthy Road to the East. The site is currently being used for agricultural purposes. This proposed development includes 161 single family lots (See Figure 1 for Vicinity Map)

There are no existing wastewater mains in the immediate area of the proposed development. A main sewer trunk line is currently being designed by Johnson Utilities along Ocotillo Road alignment for future wastewater collection. The new Pecan wastewater treatment plant is scheduled to be in service on May 24, 2003. A will-serve letter has been issued for Preliminary Plat submittal.

Site topography was obtained from an ALTA survey completed by Hunter Engineering. The survey information agrees with local USGS information for the area. The existing site topography is relatively flat with a gentle slope downward of approximately 0.40 % from southeast to northwest (See Figure 2 for Existing Site Topography).

System Analysis

In order to determine the peak flow, an average flow and a *peaking factor* were used with respect to upstream population draining to each pipe. Contained within Title 18, Chapter 9 of the Department of Environmental Quality, Arizona Administrative Code, Section E301 & E323 are Unit Daily Design Flows and Peaking Factors utilized for Sewer Design. A total of 161 dwelling units (DU) was used for this analysis. See ~~Appendix B for Daily Design Flows and Peaking Factor Tables.~~

An average flow of 100 gallons per capita per day and 3 people per dwelling unit were assumed for this analysis. A total average daily flow of 48,300 gallons was calculated, which equates to an average flow of 33.54 gallons per minute (gpm) for the entire development. A peaking factor of 2.64 was used based on upstream population (from the previously mentioned peaking factor table). The peak flow for the entire site is approximately 127,512 gallons per day, or 88.55 gpm.

A rating table for circular pipe running full was prepared for various pipe diameters. The minimum allowable slope is defined by the Arizona Department of Environmental Quality as a slope that will produce a minimum flow velocity of 2 feet per second when flowing full.

Pipe flow capacity was determined using Manning's equation. A minimum slope of 0.0033 ft/ft was determined to allow for a velocity of 2 feet per second and a capacity of 301 gallons per minute for an 8" diameter pipe flowing full. This will be adequate for this site and potential additional capacity to the north of this site for future development. The 8" pipe is adequate for estimated maximum peak hourly flow conditions with additional capacity available for potential future development directly to the north of this site. The pipe networks were identified and numbered as proposed 8" diameter pipe sections containing manholes with a 0.1-foot drop across manholes

which have an upstream pipe which is at an angle greater than 5 degrees with respect to the downstream pipe. (See Appendix A).

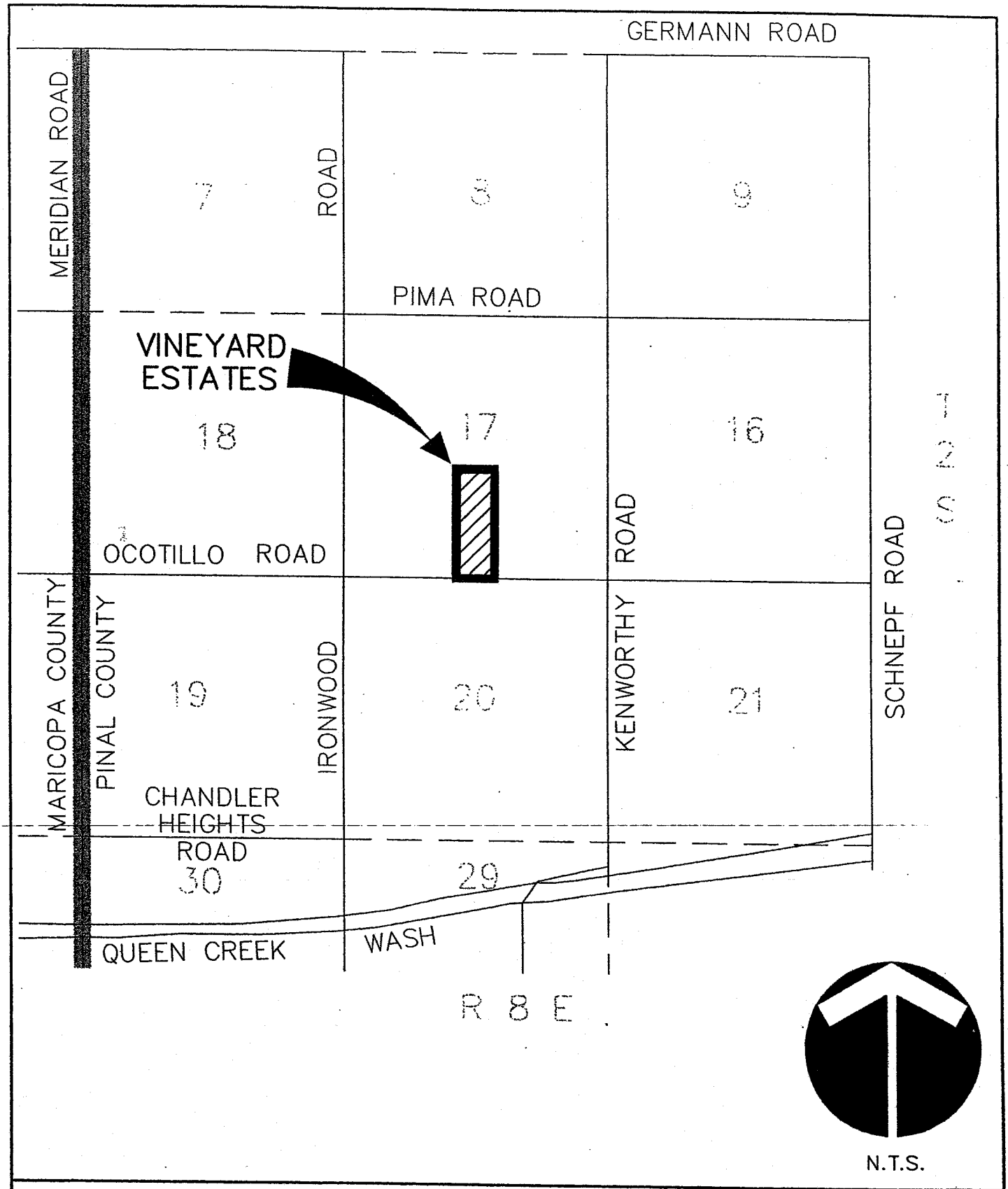
Figure 3 – Sewer Layout identifies the pipe layout with numbered manholes. Appendix A lists the manhole numbers with the downstream manhole and the upstream manhole(s).

Pipe lengths to the downstream manhole were estimated and the invert elevation for both the inflow and outflow side of each manhole was calculated. A preliminary grading plan shows that there is sufficient grade to maintain a minimum ground cover of four feet above the proposed pipe system. An on-site wastewater collection system will collect and discharge wastewater into one location along the proposed sewer main in Ocotillo Road which will be approximately 17 feet deep.

Conclusions

A gravity wastewater collection system will adequately serve the development utilizing an 8" diameter gravity pipe with the minimum allowable slope of 0.0033 ft/ft.

The entire site will discharge to a future manhole/sewer main located along the Ocotillo Road alignment. This sewer main will gravity feed to a proposed Manhole near the intersection of Ocotillo and Ironwood (approximately ½ mile West of this site). This manhole will connect to a wastewater trunk line that will gravity flow to the new Johnson Utilities Pecan Wastewater Treatment Plant located at Ironwood Road and the south side of Queen Creek Wash. The wastewater treatment plant is now under construction and scheduled to be open on May 24, 2003. A request for service has been submitted to Johnson Utilities and a "will serve" letter has been submitted with the preliminary plat application.



Date KLN/WCC

Designed WCC

Drawn

Checked By Date

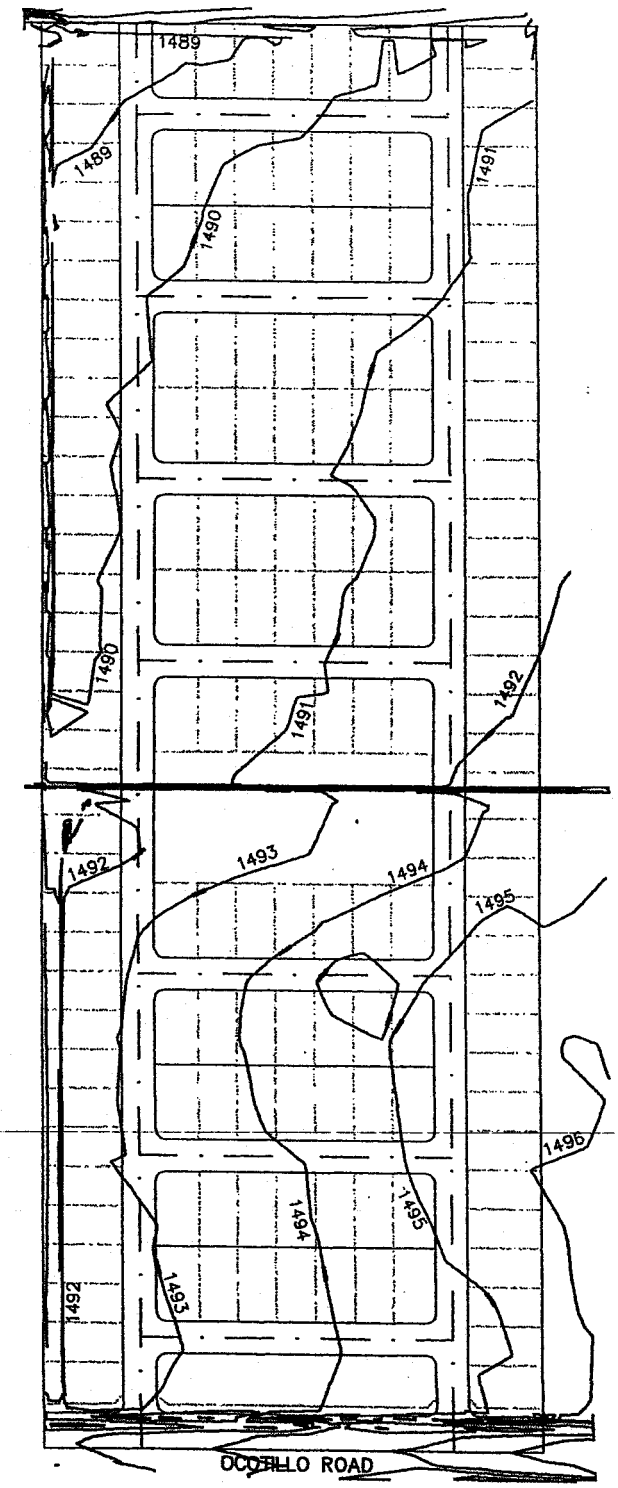
otak Incorporated
502 S. College Ave, Suite 204
Tempe, Arizona 85281
Phone: (480) 557-6670
FAX: (480) 557-6506

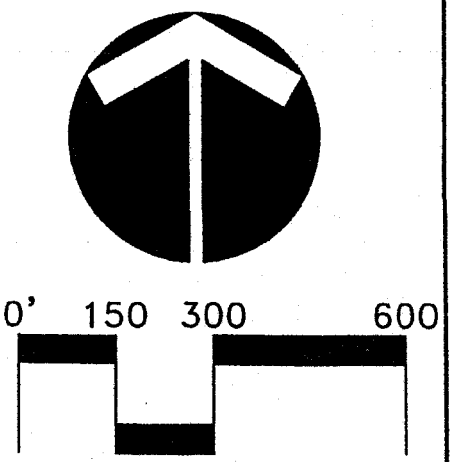
11/02

PRELIMINARY PLAT
VICINITY MAP

WASTEWATER COLLECTION MASTERPLAN

11678
Project No.
SMP-FIG-1
File No.
FIGURE 1
Sheet No.





Date KLN/WCC

Designed WCC

Drawn

Checked By Date

Otak Incorporated
502 S. College Ave, Suite 204
Tempe, Arizona 85281
Phone: (480) 557-6670
FAX: (480) 557-6506

11/02

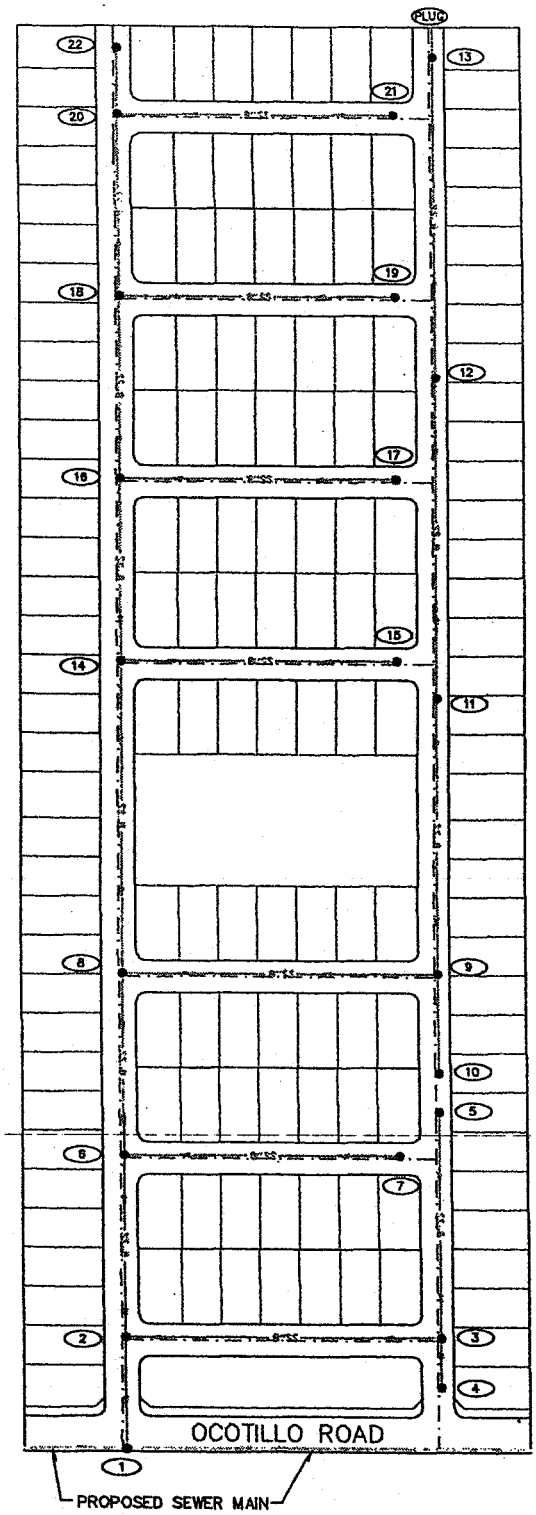
PRELIMINARY PLAT
TOPOGRAPHY MAP

WASTEWATER COLLECTION
MASTERPLAN

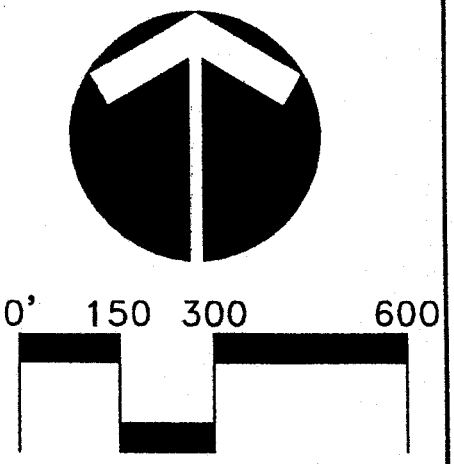
11678
Project No.

SMP-FIG-2
File No.

FIGURE 2
Sheet No.



- MANHOLE/CLEANOUT
- MANHOLE NUMBER
- 8" SEWER LINE
- SEWER MAIN



Date KLN/WCC

Designed WCC

Drawn

Checked By Date

502 S. College Ave, Suite 204
Tempe, Arizona 85281
Phone: (480) 557-6670
FAX: (480) 557-6506

11/02

PRELIMINARY PLAT SEWER LAYOUT

WASTEWATER COLLECTION MASTERPLAN

Project No. 11678

File No. SMP-FIG-3

Sheet No. FIGURE 3

Appendix A

Vineyard Estates
Master Plan Calculations

Vineyard Estates
Wastewater Collection Master Plan Calculations

Assumptions:

*Use 100 Gal/Capita/Day * 3 Capita/DU. for 161 DU*

Total Sewer Flow in the System for the Average Day = 48,300 GPD = 33.54 gpm

48,300 GPD = 0.075 cfs

Peak Flow is determined using a Peaking Factor based on Upstream Population. The table is located in Appendix B.

*Total Sewer Flow in the System for the Peak Day = 2.64 *Average Day =* 127,512 GPD = 88.55 gpm

127,512 GPD = 0.197 cfs

8" dia. PVC with minimum slope = 0.0033 ft/ft — ***Capacity = 301 gpm***

10" dia. PVC with minimum slope = 0.0024 ft/ft — ***Capacity = 494 gpm***

12" dia. PVC with minimum slope = 0.0019 ft/ft — ***Capacity = 696 gpm***

Sewer Capacity					
8	10	12	15	18	Dia
0.0033	0.0024	0.0019	0.0016	0.0011	Slope
301	494	696	1,060	1,347	gpm

Peak Discharge into MH 1= **88.55** gpm

Manhole	Downstream MH	Upstream MH 1st	Upstream MH 2nd	Upstream MH 3rd	Length to DwnStm (ft)	Inv Elev (in)	Inv Elev (out)	Sewer Dia.	Apprx. Grnd Surface ELEV	Maximum sewer invert	Check	Number DU	Depth : Prop. Grade to Invert	Additional Q (gpm) @ MH	Cumulative Q (gpm) Total
1	-	2			-	1478.20	-	8	1494.2	1488.2	OK	0	16.0	0.0	88.55
2	1	3	6		180	1478.79	1478.79	8	1492.8	1486.8	OK	7	14.0	3.9	88.55
3	2	4	5		485	1480.49	1480.49	8	1494.7	1488.7	OK	7	14.2	3.9	6.60
4	3	-			80	1480.86	1480.86	8	1494.8	1488.8	OK	1	13.9	0.6	0.55
5	3	-			350	1481.75	1481.75	8	1495.5	1489.5	OK	4	13.8	2.2	2.20
6	2	7	8		280	1479.72	1479.72	8	1493.0	1487.0	OK	11	13.3	6.1	78.10
7	6	-			425	1481.22	1481.22	8	1494.1	1488.1	OK	8	12.9	4.4	4.40
8	6	9	14		280	1480.64	1480.64	8	1492.2	1486.2	OK	14	11.6	7.7	67.65
9	8	10	11		485	1482.34	1482.34	8	1494.1	1488.1	OK	11	11.8	6.1	18.15
10	9	-			160	1482.97	1482.97	8	1494.3	1488.3	OK	2	11.3	1.1	1.10
11	9	12			430	1483.86	1483.86	8	1490.0	1484.0	OK	7	6.1	3.9	11.00
12	11	13			500	1485.51	1485.51	8	1491.6	1485.6	OK	8	6.0	4.4	7.15
13	12	PLUG			500	1487.16	1487.16	8	1493.2	1487.2	OK	5	6.0	2.8	2.75
PLUG	13	-			50	1487.33	1487.33	8	1493.3	1487.3	OK	0	6.0	0.0	0.00
14	8	15	16		490	1482.26	1482.26	8	1489.4	1483.4	OK	12	7.1	6.6	41.80
15	14	-			425	1483.76	1483.76	8	1489.8	1483.8	OK	8	6.0	4.4	4.40
16	14	17	18		280	1483.18	1483.18	8	1490.0	1484.0	OK	11	6.8	6.1	30.80
17	16	-			425	1484.69	1484.69	8	1490.7	1484.7	OK	8	6.0	4.4	4.40
18	16	19	20		280	1484.11	1484.11	8	1490.5	1484.5	OK	10	6.4	5.5	20.35
19	18	-			425	1485.61	1485.61	8	1491.6	1485.6	OK	8	6.0	4.4	4.40
20	18	21	22		280	1485.03	1485.03	8	1491.5	1485.5	OK	9	6.5	5.0	10.45
21	20	-			425	1486.53	1486.53	8	1492.5	1486.5	OK	8	6.0	4.4	4.40
22	20	-			100	1485.36	1485.36	8	1492.0	1486.0	OK	2	6.6	1.1	1.10
										Dwelling Units (EDU) =		161			

Appendix B

Arizona Department of Environmental Quality
Administrative Code
Sewer Design Standards

to accommodate the new design flow; or

ii. The sewer lines for a sewage collection system for a manufactured home, mobile home, or recreational vehicle park are not less than four inches in diameter for up to 20 units, five inches in diameter for 21 to 36 units, and six inches in diameter for 37 to 60 units.

e. Design sewer lines with at least the minimum slope calculated from Manning's Formula using a coefficient of roughness of 0.013 and a sewage velocity of two feet per second when flowing full.

i. An applicant may request a smaller minimum slope under R18-9-A312(G) if the smaller slope is justified by a quarterly program of inspections, flushings, and cleanings.

ii. If a smaller minimum slope is requested, the slope shall not be less than 50% of that calculated from Manning's formula using a coefficient of roughness of 0.013 and a sewage velocity of two feet per second.

f. Design sewer lines to avoid a slope that creates a sewage velocity greater than 10 feet per second. The applicant shall construct any sewer line carrying a flow with a normal velocity of greater than 10 feet per second using ductile iron pipe or pipe with equivalent erosion resistance, and structurally reinforce the receiving manhole or sewer main.

g. Design and install sewer lines, connections, and fittings with materials that meet or exceed manufacturer's specifications not inconsistent with this Chapter to:

i. Limit inflows, infiltration, and exfiltration;

ii. Resist corrosion in the project electrochemical environment;

iii. Withstand anticipated live and dead loads; and

iv. Provide internal erosion protection.

h. Indicate trenching and bedding details applicable for each pipe material and size in the design plans. Sewer lines shall be placed in trenches and bedded following the specifications established in subsections (D)(2)(h)(i) and (D)(2)(h)(ii). This material is incorporated by reference and does not include any later amendments or editions of the incorporated matter. Copies of the incorporated material are available for inspection at the Department of Environmental Quality and the Office of the Secretary of State, or may be obtained from the Maricopa Association of Governments, 302 N. 1st Avenue, Suite 300, Phoenix, Arizona 85003, or from Pima County Wastewater Management, 201 N. Stone Avenue, Tucson, Arizona 85701-1207.

i. "Trench Excavation, Backfilling, and Compaction" (Section 601), published in the "Uniform Standard Specifications for Public Works Construction," published by the Maricopa Association of Governments, revisions through 2000; and

ii. "Rigid Pipe Bedding for Sanitary Sewers" (WWM 104), and "Flexible Pipe Bedding for Sanitary Sewers" (WWM 105), published by Pima County Wastewater Management, revised November 1994.

i. Perform a deflection test of the total length of all sewer lines made of flexible materials to ensure that the installation meets or exceeds the manufacturer's recommendations and record the results.

j. Test each segment of the sewer line for leakage using the applicable method below and record the results:

i. "Standard Test Method for Installation of Acceptance of Plastic Gravity Sewer Lines Using Low-Pressure Air" published by the American Society for Testing and Materials, (F 1417-92), reapproved 1998;

ii. "Standard Practice for Testing Concrete Pipe Sewer Lines by Low-Pressure Air Test Method" published by the American Society for Testing and Materials, (C 924-89), reapproved 1997;

iii. "Standard Test Method for Low-Pressure Air Test of Vitrified Clay Pipe Lines" published by the American Society for Testing and Materials, (C 828-98), approved March 10, 1998; or

iv. The material listed in subsections (D)(2)(j)(i), (D)(2)(j)(ii), and (D)(2)(j)(iii) is incorporated by reference and does not include any later amendments or editions of the incorporated matter. Copies of the incorporated material are available for inspection at the Department of Environmental Quality and the Office of the Secretary of State, or may be obtained from the American Society for Testing and Materials, 100 Barr Harbor Drive, Conshohocken, PA 19428-2959.

k. Test the total length of the sewer line for uniform slope by lamp lighting, remote camera or similar method approved by the Department, and record the results.

3. Manholes.

a. An applicant shall install manholes at all grade changes, all size changes, all alignment changes, all sewer intersections, and at any location necessary to comply with the following spacing requirements:

Sewer Pipe Diameter (inches)	Maximum Manhole Spacing (feet)
4 to less than 8	300
8 to less than 18	500
18 to less than 36	600
36 to less than 60	800
60 or greater	1300

b. The Department shall allow greater manhole spacing following the procedure provided in R18-9-A312(G) if documentation is provided showing the operator possesses or has available specialized sewer cleaning equipment suitable for the increased spacing.

c. The applicant shall ensure that manhole design is consistent with "Pre-cast Concrete Sewer Manhole" (#420), "Offset Manhole for 8" - 30" Pipe" (#421), and "Brick Sewer Manhole and Cover Frame Adjustment" (#422), 1998, including revisions through 2000, published by the Maricopa Association of Governments; and "Manholes and Appurtenant Items" (WWM 201 through WWM 211), Standard Details for Public Improvements, 1994 Edition, published by Pima County Wastewater Management.

d. The material specified in subsection (D)(3)(c) is incorporated by reference and does not include any later amendments or editions of the incorporated matter. Copies of the incorporated material are

following rules. An applicant shall:

a. Base design flows for components of the system on unit flows specified in *Table 1, Unit Daily Design Flows.* If documented by the applicant, the Department may accept lower unit flow values in the served area due to significant use of low flow fixtures.

b. Use the "Uniform Standard Specifications for Public Works Construction," referenced in this Section and published by the Maricopa Association of Governments, revisions through 2000, or the "Pima County Wastewater Management," November 1994 Edition, as the applicable design and construction criteria, unless the Department approved alternative design standards or specifications authorized by a delegation agreement under A.R.S. § 49-107.

c. Use gravity sewer lines, if appropriate. The applicant shall design gravity sewer lines and all other sewer collection system components, including force mains, manholes, lift stations, and appurtenant devices and structures to accommodate maximum sewage flows as determined by the method specified in subsections (D)(1)(c)(i) or (D)(1)(c)(ii) that yields the greatest calculated flow:

i. Any point in a sewer main when flowing full can accommodate an average flow of 100 gallons per capita per day for all populations upstream from that point; or

ii. Any point in a sewer collection system can accommodate a peak flow for all populations upstream from that point as tabulated below:

Upstream Population	Peaking Factor
100	3.62
200	3.14
300	2.90
400	2.74
500	2.64
600	2.56
700	2.50
800	2.46
900	2.42
1000	2.38
1001 to 10,000	$PF = (6.330 \times p^{-0.231}) + 1.094$
10,001 to 100,000	$PF = (6.177 \times p^{-0.233}) + 1.128$
More than 100,000	$PF = (4.500 \times p^{-0.174}) + 0.945$

PF = Peaking Factor p = Upstream Population

d. Ensure the separation of sewage collection system components from drinking water distribution system components under R18-4-502.

e. Request review and approval of an alternative to a design feature specified in this Section by following the requirements of R18-9-A312(G).

2. Gravity sewer lines. An applicant shall:

a. Ensure that any sewer line that runs between manholes, if not straight, is of constant horizontal curvature with a radius of curvature not less than 200 feet;

b. Cover each sewer line with at least three feet of backfill meeting the requirements of subsection (D)(2)(h)(i). The applicant shall:

i. Include at least one note specifying this requirement in construction plans;

ii. If site-specific limitations prevent three feet of earth cover, provide the maximum cover attainable, and construct the sewer line of ductile iron pipe or other materials of equivalent or greater tensile and compressive strength;

iii. If ductile iron pipe is not used, design and construct the sewer line pipe with restrained joints or an equivalent feature; and

E. Installation requirements. An applicant shall ensure that:
   1. The irrigation pipe is installed by a plow mechanism that cuts a furrow, dispenses pipe, and covers the irrigation pipe in one operation, or a trencher and hand tools that dig a trench not more than four inches wide.
   2. Drip irrigation pipe has an incorporated herbicide to prevent root intrusion for at least 10 years and an incorporated bactericide to reduce bacterial slime build-up. The applicant shall store drip irrigation pipe to preserve the herbicidal and bactericidal characteristics of the pipe.

F. Operation and maintenance requirements. In addition to the applicable requirements in R18-9-A313, the permittee shall test the fail-safe mechanism quarterly to prevent discharge of inadequately treated wastewater.

R18-9-E323. 4.23 General Permit: 3000 to less than 24,000 Gallons Per Day Design Flow

A. A 4.23 General Permit allows on-site wastewater treatment facilities with a design flow from 3000 gallons per day to less than 24,000 gallons per day if all of the following apply:
   1. Except as specified in subsection (A)(3), the treatment and disposal works consists of technologies or designs that are covered under other general permits, but are sized larger to accommodate increased flows.
   2. The on-site wastewater treatment facility complies with all applicable requirements of this Chapter.
   3. The facility is not a system or a technology covered by one of the following general permits available for a design flow of less than 3000 gallons per day:
      a. An aerobic system with subsurface disposal, described in R18-9-E315,
      b. An aerobic system with surface disposal, described in R18-9-E316,
      c. A disinfection device, described in R18-9-E320,
      d. A sequencing batch reactor, described in R18-9-E321, or
      e. A seepage pit or pits, described in R18-9-E302,

B. Notice of Intent to Discharge. In addition to the Notice of Intent to Discharge requirements specified in R18-9-A301(B), an applicant shall submit:
   1. A performance assurance plan consisting of tasks, schedules, and estimated annual costs for operating, maintaining, and monitoring performance over a 20-year useful service life.
   2. Design documents and the performance assurance plan sealed by an Arizona-registered professional engineer.
   3. Any documentation submitted under the alternative design procedure in R18-9-A312(G) that pertains to achievement of better performance levels than those specified in the general permit for the corresponding facility with a design flow of less than 3000 gallons per day, or for any other alternative design, construction, or operational change proposed by the applicant.

C. Additional Verification of General Permit Conformance requirements. In addition to any other requirements, the applicant shall submit the following information before the Verification of General Permit Conformance is issued.
   1. A signed and sealed Engineer's Certificate of Completion in a format approved by the Department affirming that:
      a. The project was completed in compliance with the requirements of this Section and as described in the plans and specifications, or
      b. Any changes are reflected in as-built plans submitted with the Engineer's Certificate of Completion.
   2. ~~The name of a certified operator or service company that is responsible for implementing the performance assurance plan.~~

D. Reporting requirement. The permittee shall annually provide the Department with:
   1. A form signed by the certified operator or service company that:
      a. Provides any data or documentation required by the performance assurance plan,
      b. Certifies compliance with the requirements of the performance assurance plan, and
      c. Describes any additions to the system during the year that increased flows and certifies that the flow did not exceed 24,000 gallons per day during any day.
   2. Any applicable fee required by 18 A.A.C. 14.

Table 1. Unit Daily Design Flows

Type of Facility Served	Applicable Unit	Sewage Design Flow per Applicable Unit, Gallons Per Day
Airport	Passenger (average daily number) Employee	4 15
Apartment Building	Resident (if max. number fixed)	100
1 bedroom	Apartment	200
2 bedroom	Apartment	300
3 bedroom	Apartment	400
4 bedroom	Apartment	500

Auto Wash	Facility	Per manufacturer, if consistent with this Chapter
Bar/Lounge	Seat	30
Barber Shop	Chair	35
Beauty Parlor	Chair	100
Bowling Alley (snack bar only)	Lane	75
Camp		
Day camp, no cooking facilities	Camping unit	30
Campground, overnight, flush toilets	Camping unit	75
Campground, overnight, flush toilets and shower	Camping unit	150
Campground, luxury	Person	100-150
Camp, youth, summer or seasonal	Person	50
Church		
Without kitchen	Person (maximum attendance)	5
With kitchen	Person (maximum attendance)	7
Country Club	Resident Member	100
	Nonresident Member	10
Dance Hall	Patron	5
Dental Office	Chair	500
Dog Kennel	Animal, maximum occupancy	15
Hospital		
All flows	Bed	250
Kitchen waste only	Bed	25
Laundry waste only	Bed	40
Hotel/motel		
Without kitchen	Bed (2 person)	50
With kitchen	Bed (2 person)	60
Industrial facility		
Without showers	Employee	25
With showers	Employee	35
Cafeteria, add	Employee	5
Institutions		
Resident	Person	75
Nursing home	Person	125
Rest home	Person	125
Laundry		
Self service	Wash cycle	50
Commercial	Washing machine	Per manufacturer, if consistent with this Chapter
Office Building	Employee	20
Park		
Picnic, with showers, flush toilets	Parking space	40
Picnic, with flush toilets only	Parking space	20
Recreational vehicle, no water or sewer connections	Vehicle space	75
Recreational vehicle, with water & sewer connections	Vehicle space	100
Mobile home/Trailer	Space	250

Residence		
Dwelling, per person (for sewer collection system design only)	Person	100
Dwelling, single family	Dwelling (3 bedrooms assumed)	450
Dwelling, per bedroom if count available	Bedroom	150
Dwelling, per fixture if count available	Fixture unit	25
Mobile home, family	Home lot	250
Mobile home, adults only	Home lot	150
Seasonal and summer	Resident	100
Restaurant/Cafeteria	Employee	20
With toilet, add	Customer	7
Kitchen waste, add	Meal	6
Garbage disposal, add	Meal	1
Cocktail lounge, add	Customer	2
Kitchen waste disposal service, add	Meal	2
Restroom, public	Toilet	200
School		
Staff and office	Person	20
Elementary, add	Student	15
Middle and High, add	Student	20
with gym & showers, add	Student	5
with cafeteria, add	Student	3
Boarding, total flow	Person	100
Service Station with toilets	First bay	1000
	Each additional bay	500
Shopping Center, no food or laundry	Square foot of retail space	0.1
Store	Employee	20
Public restroom, add	Square foot of retail space	0.1
Swimming Pool, Public	Person	10
Theater		
Indoor	Seat	5
Drive-in	Car space	10

Note: Unit flow rates published in standard texts, literature sources or relevant area or regional studies shall be considered by the Department, if appropriate to the project.

ARTICLE . 4. AGRICULTURAL GENERAL PERMITS

~~R18-9-401. Definitions~~

In addition to the definitions established in A.R.S. §§ 49-101 and 49-201, the following terms apply to this Article:

1. "Application of nitrogen fertilizer" means any use of a substance containing nitrogen for the commercial production of crop plants. The commercial production of crop plants includes commercial sod farms and nurseries.
2. "Crop plant needs" means the amount of water and nitrogen required to meet the physiological demands of the crop plant to achieve a defined yield.
3 "Crop plant uptake" means the amount of water and nitrogen that can be physiologically absorbed by the roots and vegetative parts of a crop plant following the application of water.

R18-9-402. Agricultural General Permits: Nitrogen Fertilizers

A person who engages in the application of a nitrogen fertilizer and is issued an agricultural general permit shall comply with the following agricultural best management practices:

1. Limit application of the fertilizer so that it meets projected crop plant needs;
2. Time application of the fertilizer to coincide to maximum crop plant uptake;
3. Apply the fertilizer by a method designed to deliver nitrogen to the area of maximum crop plant uptake;
4. Manage and time application of irrigation water to minimize nitrogen loss by leaching and runoff; and
5. Use tillage practices that maximize water and nitrogen uptake by crop plants.

R18-9-403. Agricultural General Permits: Concentrated Animal Feeding Operations

A person who engages in or operates a concentrated animal feeding operation and is issued an agricultural general permit shall comply with the following agricultural best management practices:

MILAGRO

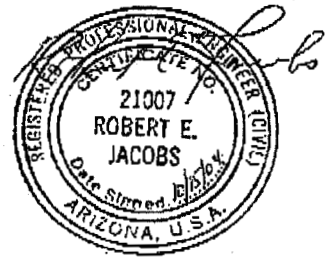
Westbrook Subdivision

Pinal County, Arizona

Master Wastewater Collection System Report

Century Pacific Homes of Arizona, Inc.
Linda Luther
3760 Highland Drive, Suite 505
Salt Lake City, Utah 84106

October, 2004



Stanley Consultants INC
A Stanley Group Company
Engineering, Environmental and Construction Services - Worldwide

Stanley Consultants INC.

A Stanley Group Company
Engineering, Environmental and Construction Services Worldwide

October 13, 2004

Johnson Utilities Company
968 E. Hunt Highway
Queen Creek, AZ 85242

Dear Sirs:

Attached is the Master Wastewater Collection System Report for the Westbrook Subdivision located in Pinal County, Arizona. Please contact me at Stanley Consultants at 1-801-293-8880 if you have questions.

Sincerely,

Stanley Consultants, Inc.

Les Clawson

Les Clawson
Project Designer

lwc

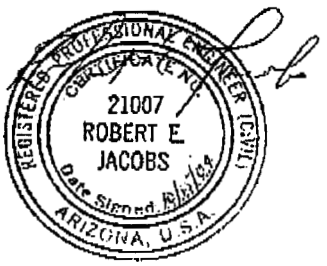
5353 South 960 East, Suite 220 • Salt Lake City, UT 84117 • phone 801.293.8880 • fax 801.293.8886
www.stanleyconsultants.com

Executive Summary

Westbrook is a development consisting of 140 single family units located in Pinal County, Arizona. The calculations included show that a 8" sewer line designed at the minimal required slope will be adequate to handle any sewer flow plus infiltration generated by the development.

Table of Contents

TABLES



Section 1

Introduction

Project Location

Westbrook Subdivision is a Single Family Residential development located off of Kenworthy Road in Pinal County, Arizona. The project is 140 Units on 37.35 acres.

Scope

The scope of this report is to provide the Master Wastewater Collection System design for the project. The project lies within the jurisdictions of Johnson Utilities Company.

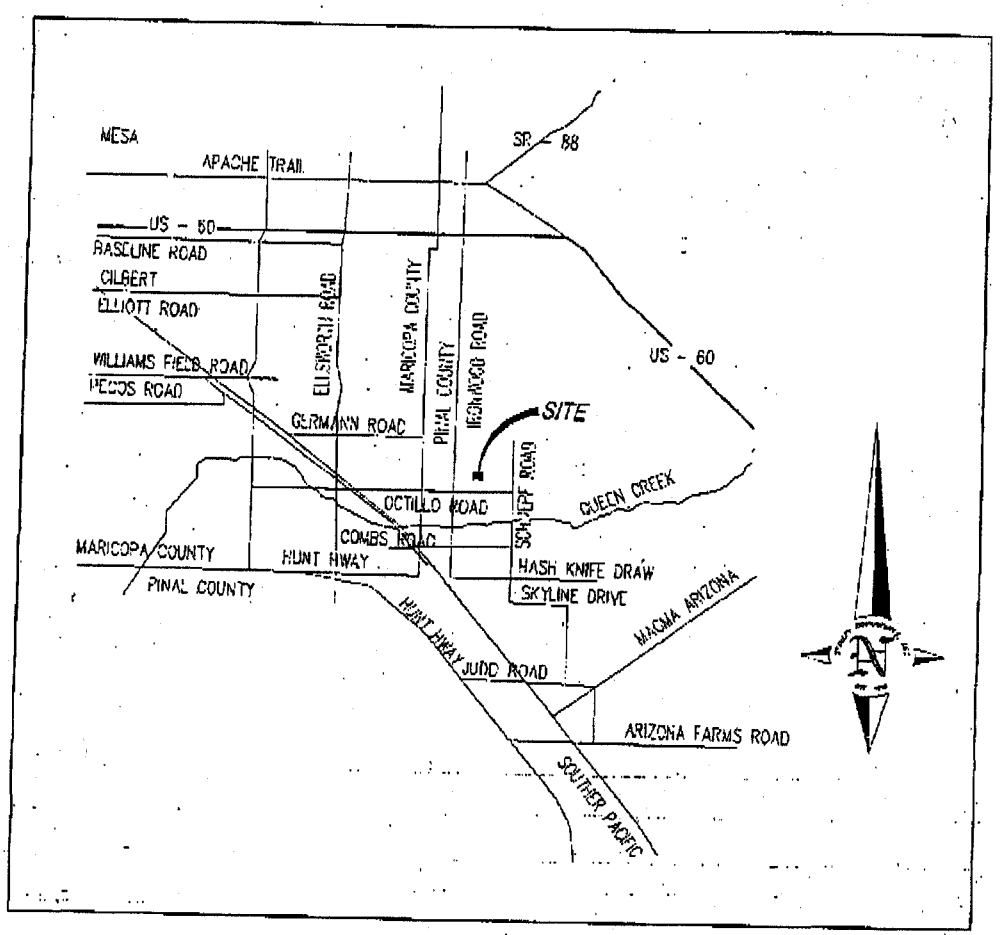


Figure 1. Project Location Map

Section 2

Design Parameters and Assumptions

The following are the design parameters and assumptions:

- 90 Gallons/Person/Day (GPD) for all residential areas
- 2.6 Person/Dwelling Unit (DU)
- 2.90 Peaking Factor (PF)
- 250 Gallons/Acre/Day (GAD) for wet weather flow infiltration and inflow
- Manning's "n" roughness coefficient = 0.013
- Minimum Design Slopes

8" Diameter	0.0033 Ft/Ft
10" Diameter	0.0024 Ft/Ft
12" Diameter	0.0019 Ft/Ft

Calculations

- 140 Units X 2.6 Persons/Unit X 90 GPD X 2.9 PF = 95,004 GPD
- Infiltration = 37.35 Acres X 250 GAD = 9,338 GPD
- Total Flow = 95,004 GPD + 9,338 GPD = **104,342 GPD = 72.5 GPM**
- Minimum Design Slope for Project = 8" pipe @ 0.0034 ft/ft
- Design Capacity @ 70% = **220 GPM**

Therefore the sewer pipes designed (220 GPM) for this project are adequate for the total flows (72.5 GPM) required.

Table 1

Peak Dry Weather Flow Factor Ratios for Wastewater Basin Study

Pima County Wastewater Management

POPULATION	PEAKING FACTOR
100	3.62
200	3.14
300	2.90
400	2.74
500	2.64
600	2.56
700	2.50
800	2.46
900	2.42
1000	2.38
1500	2.28
2000	2.20
2500	2.15
3000	2.10
4000	2.02
5000	1.98
6000	1.93
7000	1.92
7000	1.92
8000	1.89
9000	1.87
10000	1.85
15000	1.80
20000	1.74
25000	1.71
30000	1.69

Respectfully submitted,

Stanley Consultants, Inc.

Prepared by Les Clawson

Les Clawson Project Designer

Reviewed by

Reid Dickson Project Manager

Approved by

Bob Jacobs Project Engineer

Cc:
Linda Luther

Lwc

WAYNE RANCH

MASTER WASTEWATER REPORT
FOR

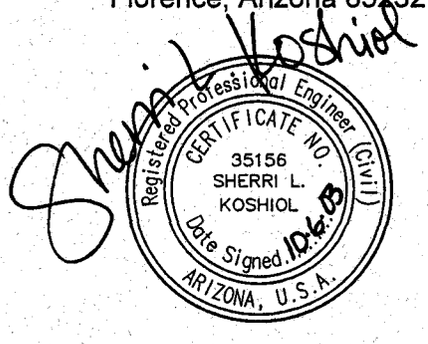
WAYNE RANCH

NWC OCOTILLO ROAD & KENWORTHY ROAD
PINAL COUNTY, ARIZONA

Prepared for:
DEL PUEBLO HOMES, L.L.C.
7520 East Angus Drive
Scottsdale, Arizona 85251

Prepared By:
CMX, L.L.C.
1035 North McQueen Road, Suite 123
Gilbert, Arizona 85233
480.648.1900

Submitted to:
PINAL COUNTY
31 North Pinal Street, Building F
Florence, Arizona 85232

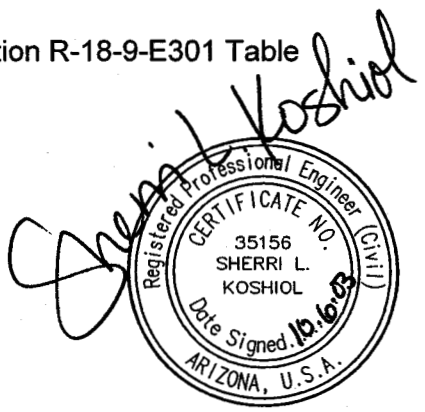


Revised October 6, 2003
August 2003
CMX Project No. 6834

MASTER WASTEWATER REPORT
FOR
WAYNE RANCH

TABLE OF CONTENTS

APPENDICES



I. INTRODUCTION

This report presents the Wastewater Master Plan for Wayne Ranch. Wayne Ranch, a Planned Area Development (PAD), is a proposed 115-acre, 423 dwelling unit community located in north central Pinal County, Arizona in Township 2 South, Range 8 East, Section 17, of the Gila and Salt River Meridian. The property is generally bounded by Gantzel (formally Vineyard) Road on the west, Cambria residential community on the south, Westbrooke Road on the north, and Kenworthy Road on the east, as seen on Figure 1 in Appendix A.

The site is located on land that was previously used for agricultural activities. The property to the immediate east and west of the site is a mix of agricultural and low-density residential development consisting of housing on large lots. The property to the north and south of the site is split between the new residential subdivision "Cambria", low-density residential lots and agricultural land use.

This Master Wastewater Report has been prepared in accordance with ADEQ standards and those of the service provider, Arizona Utility Supply & Services. The purpose of this report is to present the design criteria, analysis, and conclusions for providing sewer service to Wayne Ranch. The report includes a preliminary analysis of the gravity sewer network within the development as it ties into the proposed 12" sewer line that will be installed along the Joy Drive alignment. Design parameters are provided. These design parameters will be used in preparation of the construction plans.

Domestic water will be provided to the project by H_2O INC. A copy of the Master Water Report has also been prepared.

II. LAND USE / DEVELOPMENT PHASING

The project consists primarily of 423 single-family residential lots and various open space areas. The project will be developed in three phases (refer to Figure 2 in Appendix A for the phasing exhibit).

III. OFFSITE WASTEWATER SYSTEM

The Wayne Ranch sewer will tie into the proposed 12" gravity sewer line that is being installed by Arizona Utility Supply & Services along the Joy Drive alignment. This 12" sewer line will be constructed within a 25-foot easement that extends between phases 1 & 3 of Wayne Ranch. This 12" sewer line will extend from Kenworthy Road to Gantzel Road to a new lift station, which is also being constructed by Arizona Utility Supply & Services along the East side of Gantzel Road. From the lift station the sewer will be directed south to the new Waste Water Treatment Plant that is being constructed along the East side of Gantzel Road just south of the Queen Creek Wash.

IV. DESIGN CRITERIA

A. Arizona Utility Supply and Services Company Standards

The flow requirements used in this report are based on criteria required by Johnson Utilities Company, Standard Specifications for Water & Sewer Construction[1]. Following is a summary of the design criteria utilized.

1. The average wastewater flow generated per single-family residential unit, per Johnson Utilities Company requirements, is 234 gpd, which is based upon 90 gpd/person at 2.6 people per dwelling unit.

2. Per Reference 1, Johnson Utilities Company Standard Specifications for Sewer Construction, wastewater lines shall be designed to provide mean velocities, when flowing full, of not less than 2.0 feet per second (fps), nor greater than 10.0 fps. The following table indicates the minimum slopes generally considered necessary to maintain a minimum 2.0 fps velocity based upon Manning's formula with an "n" value of 0.013 for all sewers. [1]

Size	Minimum Design Slope (with n = 0.013)
8"	0.0033
10"	0.0024
12"	0.0019
15"	0.0014
18"	0.0011

B. Additional Design Requirements

In addition to the design criteria used above the following additional standards will be utilized in designing and constructing the wastewater system for Wayne Ranch. These standards are based on criteria from Johnson Utilities Company as mentioned above[1] and Arizona Administrative Code, as set forth in Title 18. Environmental Quality, Chapter 9. Department of Environmental Quality Water Pollution Control, Article 3. Aquifer Protection Permits – General Permits, Part E. Type 4 General Permits, 4.01 General Permit: Sewage Collection Systems (R-18-9-E301)[2] effective March 31, 2003.

1. The Peaking Factors used to calculate peak flow rates for the Wayne Ranch internal wastewater system were the Peaking Factors shown in Table 1 on page four of the Johnson Utilities Company Design Guide and Standard Details manual dated July 2002 (refer to Table 4).

2. All wastewater collector lines shall be a minimum of 8 inches in diameter.

3. Manholes shall be installed at all grade changes, all size changes, all alignment changes, all sewer intersections (except with service connections), and at any location necessary to comply with the following spacing requirements:

Pipe Size	Maximum Spacing
8" – 18"	500'
18" – 36"	600'

Cleanouts may be used in place of manholes at the end of laterals less than 200 feet in length.

4. The pipe material used shall have established American Society for Testing Materials (ASTM) and to the manufacturer's recommended standards. The following types of pipe material are acceptable. Johnson Utilities shall allow alternative pipe materials subject to approval.

   a) All lateral sewer lines shall be polyvinyl chloride (PVC) unless ductile iron is required to satisfy the separation requirements of ADEQ.

   b) All interceptor and larger sewer lines shall be PVC lined reinforced concrete pipe. All PVC lining systems shall cover the entire interior of the pipe, 360 degree lining, and be of a type approved by the company.

5. Wastewater lines will generally be located in the center of the driving lane, on the south and west sides of the roadway centerline, and on the opposite side of the street from any potable water line. Manholes will be located 6 feet off the centerline to the south and west. This change from the Johnson Utilities specifications is due to the fact that water provider, H_2O Water Company, has a design specification of placing the potable water lines to the north and east of the centerline of the roadway.

6. Easement widths provided for wastewater lines shall be a minimum of twelve (12) feet. The minimum horizontal separation from a wastewater line to another underground utility shall be six (6) feet. Exceptions must be approved by Arizona Utility Supply and Services

7. The minimum vertical separation of a wastewater line crossing under a water line shall be one (1) foot. The wastewater line shall be encased in concrete of 6-inch minimum thickness for at least ten (10) feet in both directions from the crossing. If a vertical separation of two (2) feet, or more, is used, then the wastewater line need not be encased in concrete. When a water line must cross under a wastewater line, a vertical separation of at least two (2) feet between the bottom of the wastewater line and the top of the water line shall be maintained with support provided for the

wastewater line to prevent settling. The wastewater line shall be constructed of cast iron pipe with mechanical joints, or other approved pipe, for at least ten (10) feet in both directions from the crossing, and the wastewater line shall be encased in concrete of 6-inch minimum thickness for the same distance.

8. All collectors, trunk, and interceptor lines shall have sufficient depth to serve the ultimate drainage area with a minimum cover of four (4) feet measured from finished grade to the top of the pipe.

9. On wastewater lines 6 to 12 inches in diameter, manholes shall be four (4) foot diameter with standard 24-inch frames and covers. Five (5) foot diameter manholes shall be provided on all wastewater lines, regardless of size, where the depth of the line from the finished grade to the pipe invert is greater than twelve (12) feet.

10. All developments within Wayne Ranch will be required to connect to the wastewater system. No on-site disposal systems will be allowed.

V. ONSITE WASTEWATER SYSTEM

The project site gradually slopes to the west/northwest. All of the wastewater collector lines were sized to a minimum diameter of 8 inches. There is one sewer line in Phase 3 of the project that will be 12 inches in diameter.

All wastewater trunk lines were sized using 2.6 persons per dwelling unit that Johnson Utilities recommends. Table 1 summarizes the peak flow from each phase based on the 2.6 persons per dwelling unit and 90 gallons/capita/day. Table 3 is a summary of the sewer flow calculations for an 8-inch pipe at a minimum slope of 0.0033 ft/ft. The peak factors based on the Arizona Administrative Code are summarized in Table 5.

VI. CONCLUSIONS

Based upon this report, the following can be concluded:

- The wastewater generated by Wayne Ranch will be conveyed to a wastewater treatment facility located on the east side of Gantzel Road just south of the Queen Creek Wash that is being constructed and operated by Arizona Utility Supply and Services.

- The current Wayne Ranch service area can be served by a gravity collection system being installed along the Joy Drive alignment.

- Sewer mains within the development will be sized and sloped to provide a minimum design velocity of 2.0 fps at peak flow.

- Detailed design of the various sewer lines is provided in the subdivision plans.

VII. REFERENCES

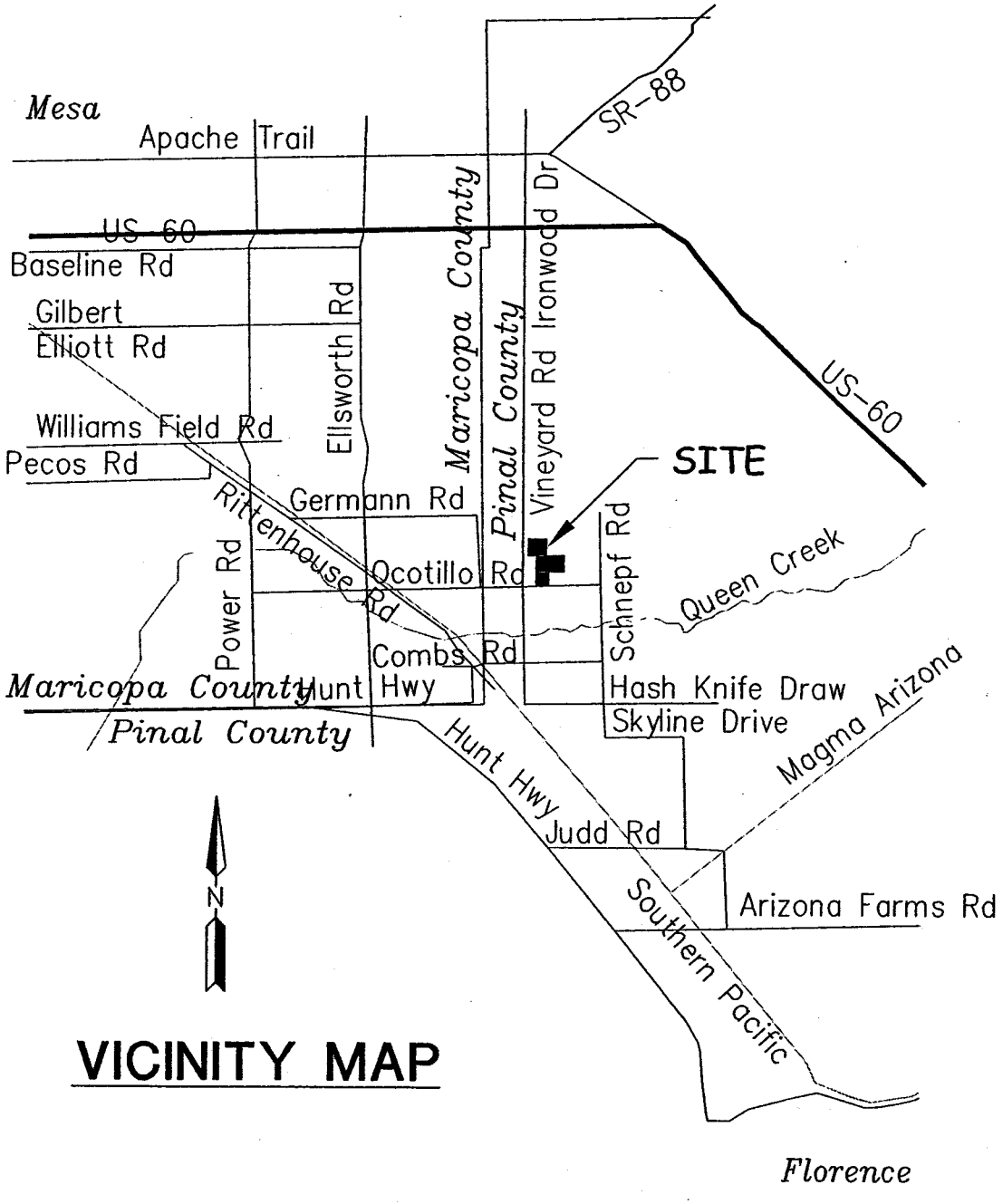
1. Johnson Utilities Company Design Guide and Standard Details, July 2002.

2. Arizona Administrative Code, Title 18. Environmental Quality, Chapter 9. Department of Environmental Quality Water Pollution Control, Article 3. Aquifer Protection Permits – General Permits Section R18-9-E301, Part E. Type 4 General Permits, 4.01 General Permit: Sewage Collection Systems, Supplement 03-1, Effective March 31, 2003.

A

FIGURE 1

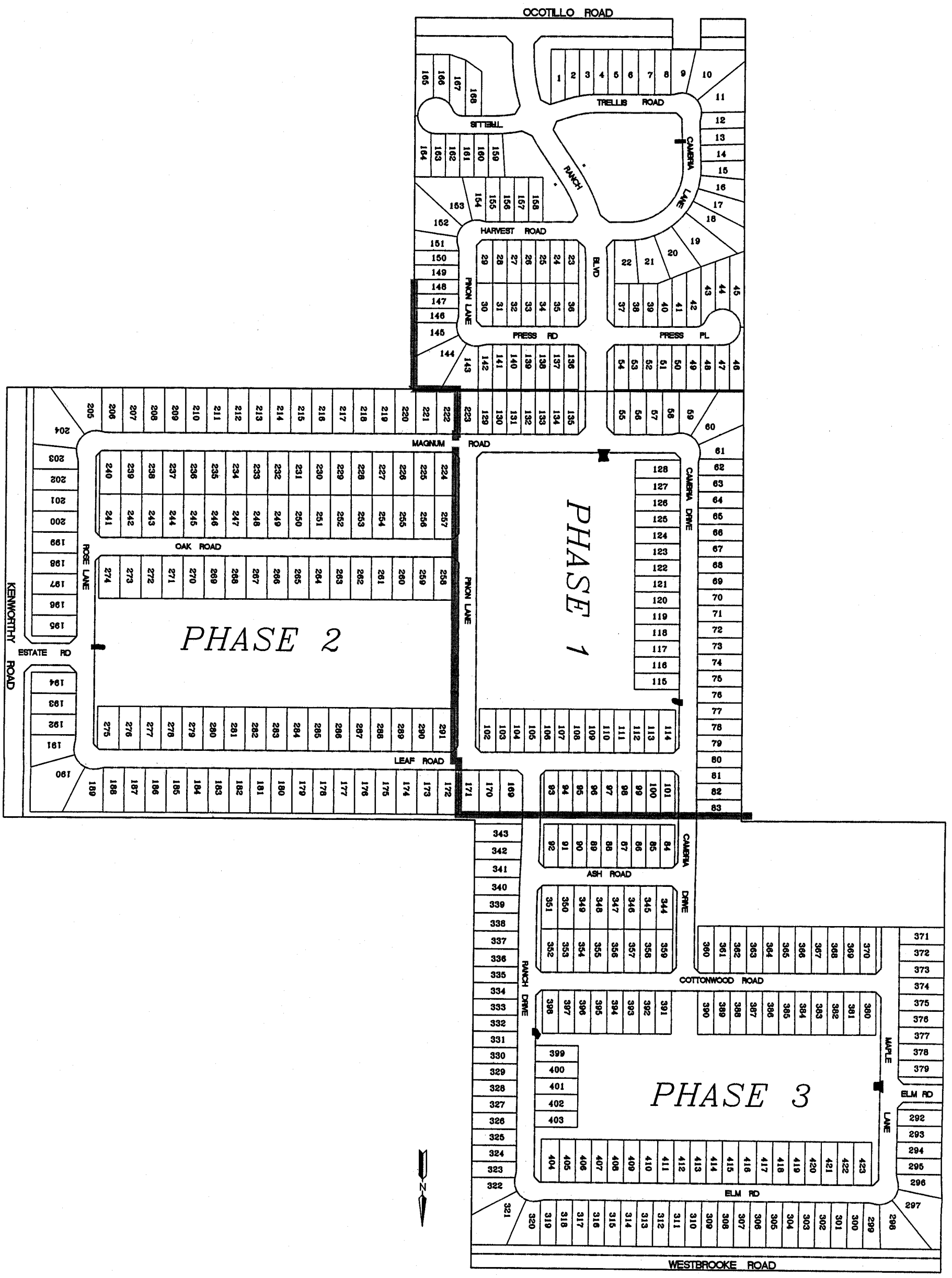
VICINITY MAP



VICINITY MAP

FIGURE 2

PHASING EXHIBIT



7740 NORTH 16TH STREET
PHOENIX, AZ 85020
PH (602) 567-1900
FAX (602) 567-1901
www.cmxinc.com

WAYNE RANCH

OCOTILLO RD & KENWORTHY RD
PINAL COUNTY, ARIZONA

PHASING EXHIBIT

CMX PROJ.	6834
DATE:	AUG 2003
SCALE:	N.T.S.
DRAWN BY:	MEK
CHECKED BY:	SLK

FIGURE 3

WASTEWATER MASTER PLAN

OCOTILLO ROAD

KENWORTHY ROAD

WESTBROOKE ROAD

EX 12"S

LEGEND

EXISTING SEWER

PROPOSED SEWER

SEWER MANHOLE

SCALE 300 150 0 300 600 FEET

N

SEWER MASTERPLAN EXHIBIT

1515 E. MISSOURI STE.115
PHOENIX, AZ 85014
PH (602)279-8436
FAX (602)265-1191
www.cmxinc.com

WAYNE RANCH
OCOTILLO & KENWORTHY ROADS
PINAL COUNTY, AZ

UTILITY PLAN

CMX PROJ.	6834
DATE:	MAY 2003
SCALE:	1" = 300'
DRAWN BY:	BTB
CHECKED BY:	SLK

B

TABLE 1: SEWER FLOW SUMMARY
WAYNE RANCH
CMX PROJECT NO. 6834

DESIGN CRITERIA:

AVERAGE DEMAND = 90 gpcd

PERSONS PER DWELLING UNIT = 2.6

PHASE	PIPE DIAMETER (in)	SLOPE (ft/ft)	DWELLING UNITS SERVED	EFFECTIVE POPULATION	AVERAGE DEMAND (gpd)	PEAKING FACTOR	PEAK FLOW (gpd)	PEAK FLOW (mgd)	LINE CAPACITY (mgd)
1	8	0.0033	163	424	38160	2.74	104558	0.105	0.482
2	8	0.0033	119	310	27900	2.90	80910	0.081	0.482
3	8	0.0033	141	367	33030	2.90	95787	0.096	0.482

TABLE 2: DWELLING UNIT SUMMARY WAYNE RANCH CMX PROJECT NO. 6834				
PHASE	PIPE DIAMETER (in)	MINIMUM SLOPE (ft/ft)	DWELLING UNITS SERVED	MAXIMUM NUMBER DWELLING UNITS
1	8	0.0033	163	752
2	8	0.0033	119	752
3	8	0.0033	141	752

TABLE 3: SEWER FLOW CALCULATIONS
WAYNE RANCH
CMX PROJECT NO. 6834

Pipe Diameter, d (in) = 8
Pipe Slope, S (ft/ft) = 0.0033
Pipe Roughness = 0.013

$^{y}/_{d}$	y	theta	Area	Wetted	Hydraulic	Conveyance	Flow Rate		Velocity	No. of Lots That
(in/in)	(in)	(radians)	(ft^2)	Perimeter (ft)	Radius (ft)	Factor	(cfs)	(gpd)‡	(fps)	Can Be Serviced*
0.10	0.80	1.2870	0.0182	0.4290	0.0423	0.2523	0.0145	9,368	0.80	15
0.15	1.20	1.5908	0.0328	0.5303	0.0619	0.5874	0.0337	21,810	1.03	34
0.20	1.60	1.8546	0.0497	0.6182	0.0804	1.0582	0.0608	39,292	1.22	61
0.25	2.00	2.0944	0.0682	0.6981	0.0978	1.6553	0.0951	61,462	1.39	96
0.30	2.40	2.3186	0.0881	0.7729	0.1140	2.3664	0.1359	87,867	1.54	137
0.35	2.80	2.5322	0.1089	0.8441	0.1290	3.1774	0.1825	117,978	1.68	184
0.40	3.20	2.7389	0.1304	0.9130	0.1428	4.0722	0.2339	151,203	1.79	236
0.45	3.60	2.9413	0.1523	0.9804	0.1554	5.0334	0.2891	186,892	1.90	291
0.50	4.00	3.1416	0.1745	1.0472	0.1667	6.0421	0.3471	224,344	1.99	350
0.55	4.40	3.3419	0.1967	1.1140	0.1766	7.0778	0.4066	262,802	2.07	410
0.60	4.80	3.5443	0.2187	1.1814	0.1851	8.1186	0.4664	301,447	2.13	470
0.65	5.20	3.7510	0.2402	1.2503	0.1921	9.1405	0.5251	339,392	2.19	529
0.70	5.60	3.9646	0.261	1.3215	0.1975	10.1173	0.5812	375,659	2.23	586
0.75	6.00	4.1888	0.2808	1.3963	0.2011	11.0192	0.6330	409,149	2.25	638
0.80	6.40	4.4286	0.2994	1.4762	0.2028	11.8118	0.6785	438,579	2.27	684
0.85	6.80	4.6924	0.3162	1.5641	0.2022	12.4520	0.7153	462,347	2.26	721
0.90	7.20	4.9962	0.3309	1.6654	0.1987	12.8792	0.7399	478,212	2.24	746
0.95	7.60	5.3811	0.3425	1.7937	0.1910	12.9846	0.7459	482,123	2.18	752
1.00	8.00	6.2832	0.3491	2.0944	0.1667	12.0841	0.6942	448,689	1.99	700

MAXIMUM FLOW = 0.482 MGD

† P.V.C.pipe with manholes (n=0.013)
‡ 1 cfs = 646,358 gpd
* Assumes 90 gpd per person with 2.6 persons per unit and a peaking factor according to Table 1

TABLE 4: SEWER FLOW SUMMARY BY PARCEL
WAYNE RANCH
CMX PROJECT NO. 6834

DESIGN CRITERIA:

AVERAGE DEMAND =	90	gpcd
PERSONS PER DWELLING UNIT =	2.6	

PHASE	DWELLING UNITS	POPULATION	AVERAGE DEMAND (mgd)
1	163	424	0.038
2	119	310	0.028
3	141	367	0.033

TABLE 5: AZ ADMINISTRATIVE CODE SECTION R18-9-E301 WAYNE RANCH CMX PROJECT NO. 6834	
Upstream Population (p)	**Peaking Factor**
100	3.62
200	3.14
300	2.90
400	2.74
500	2.64
600	2.56
700	2.50
800	2.46
900	2.42
1000	2.38
1500	2.28
2000	2.20
2500	2.15
3000	2.10
4000	2.02
5000	1.98
6000	1.93
7000	1.92
8000	1.89
9000	1.87
10000	1.85
15000	1.78
20000	1.74
25000	1.71
30000	1.69
1001 to 10,000	$PF = (6.330 * p^{-0.231}) + 1.094$
10,001 to 100,000	$PF = (6.177 * p^{-0.233}) + 1.128$
More than 100,000	$PF = (4.500 * p^{-0.174}) + 0.945$

TAYLOR RANCH

MASTER WASTEWATER REPORT
FOR
Taylor Ranch
PINAL COUNTY, ARIZONA

Prepared For:

JOHNSON UTILITIES COMPANY
968 East Hunt Highway
Queen Creek, AZ 85242

Prepared By:

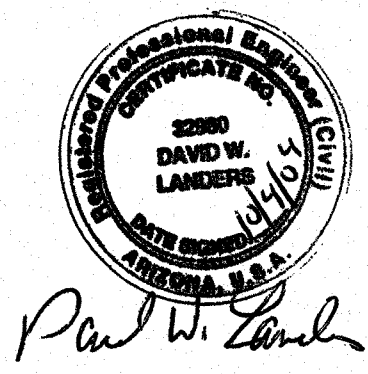
JMI & ASSOCIATES, INC.
4151 NORTH MARSHALL WAY, SUITE 12
SCOTTSDALE, ARIZONA 85251
(480) 945-1400 FAX (480) 945-4229

Civil Engineering
Subdivisions Land Planning

JMI Job No. 04926
October 4, 2004

Table of Contents

Appendix



MASTER WASTEWATER REPORT FOR
TAYLOR RANCH
PINAL COUNTY, ARIZONA

1.0 INTRODUCTION

The purpose of this report is to design a wastewater collection system to serve the needs of the proposed site. This report shows location, size, and capacity of the proposed sewer mains for the site.

The design of the sewage lift stations, force mains, and treatment facilities are not addressed in this report. This site will be served by the Johnson Utilities District and the design of the above mentioned facilities will be coordinated with the District's engineer. These design drawings will be submitted to the Arizona Department of Environmental Quality (ADEQ) under a separate application for approval to construct.

2.0 SITE DESCRIPTION

Taylor Ranch covers an area of approximately 116 acres and will consist of 395 single-family residential homes.

This project is located south of WestBrooke Road and east of the Gantzel Road alignment. This site is more specifically described as being located within a portion of Section 17, Township 2 south, Range 8 east of the Gila and Salt River Base and Meridian, Pinal County, Arizona. (See Fig. 1).

This site encompasses mostly flat agricultural land. Currently the land is being used to grow irrigated crops. There is some residential development in the area, including golf courses.

3.0 WASTEWATER COLLECTION SYSTEM

The existing topography slopes from the southeast to the northwest, this general pattern will be maintained when grading the site. The entire

Taylor Ranch development will drain to a lift station located near the intersection of Gantzel Road and the Joy Drive alignment.

The lift station and sewer main extension has been designed by Sunbelt Utility Services LLC (currently Specific Engineering). Any plans associated with the lift stations or treatment facilities will be submitted to ADEQ under separate cover by Specific Engineering and/or Johnson Utilities Company.

The enclosed master sewer plan shows the proposed sewer system with manholes, pipe sizes, and locations of the main lines (Reference Appendices B, C, & D). Actual locations, inverts, and sizes will be verified with the final design of the sewers and adjusted to avoid conflicts with other utilities and to conform to the site and to hydrologic conditions for the area.

The primary design constraint for the system is to minimize the excavation depth as much as possible. To accomplish this we have used methods related to the minimum slope, manhole drops, and minimum invert depths. In some instances the sewer lines were oversized to maintain a flatter minimum slope. Per Johnson Utilities Company design guidelines sewer lines that run straight through a manhole are continued with no drop in the manhole. Where the sewer lines enter a manhole at an angle of 5.1-45 degrees, a 0.1' drop across the manhole was used and a 0.2' drop was used for angles between 45.1-90 degrees. All sewer lines are a minimum of eight inches in diameter with a minimum of four feet of cover. For all sewer lines with an invert depth greater than 12 feet or pipe size larger than 12", 5-foot diameter manholes with 30-inch diameter covers have been utilized. The inverts for each manhole are shown in Appendicies D. Manholes have been placed whenever a change in sewer line alignment, grade or size occurs. When sewer lines of differering sizes enter the same manhole, the crown of the smaller sewer line will be at a minimum the same elevation of the crown of the larger sewer line.

4.0 FLOW ANALYSIS

The following table shows the usage of each category, the dwelling units, and areas contributinig to the lift station located in the Taylor Ranch Development.

Lift Station ID	Single Family DU	Flow Rate per Family DU (gpd)	Total Flow for Family DU (gpd)	Peaking Factor	Total Flow Including Peaking Factor (gpd)
LS	477	234	92430	2.74	**305833.32**
Lift Station ID	Comm-ercial Area (ac)	Flow Rate per (ac) (gpd)	Total Flow for Family DU (gpd)	Peaking Factor	Total Flow Including Peaking Factor (gpd)
LS	16.5	1000	16500	3.0	**49500**

Lift Station ID	Total Flow Single Family DU & Commercial Area Including Peaking Factors	Wet Weather Flow Infiltration & Inflow (GPAD)	Total Flow Including Peaking Factor & Infiltration (gpd)
LS	355333.32	29000	**384333.32**

This is based upon the approved Pinal County Preliminary Plats and the zoning approved as a part of the Taylor Ranch Planned Area Development (P.A.D.). Manning's equation was used for determining the proposed pipe sizes. A friction factor of 0.013 (for PVC), and a minimum velocity of 2.0 ft/s when flowing full was used to determine minimum slopes. The calculated flows, minimum pipe sizes and slopes for this system are tabulated in the spreadsheet located in Appendices C.

Sewer Design Criteria:

The following design criteria has been utilized for all areas within the Johnson Utilities service area unless directed otherwise by the Company, ADEQ or the A.C.C.

90 GPCD for all residential areas requiring sewers (ADWF)
1.8 persons/D.U. for all Adult Community Residences
2.6 persons/D.U. for all Family Community Residences
1000 GPAD for all commercial and school areas (ADWF)
3.0 Peaking Factor for all commercial and school areas (PDWF)
250 GPAD for wet weather flow infiltration and inflow

Residential peaking factors are based on the tributary population. The peaking factor relationship adopted by the Pima County Wastewater Management Department has been used to develop the residential peak dry-weather wastewater effluent (see Table 1).

Table 1

Peak Dry Weather Flow Factor Ratios for Wastewater Basin Study

Pima County Wastewater Management

NOTE: THIS TABLE MEETS THE REQUIREMENTS OF THE ARIZONA ADMINISTRATIVE CODE

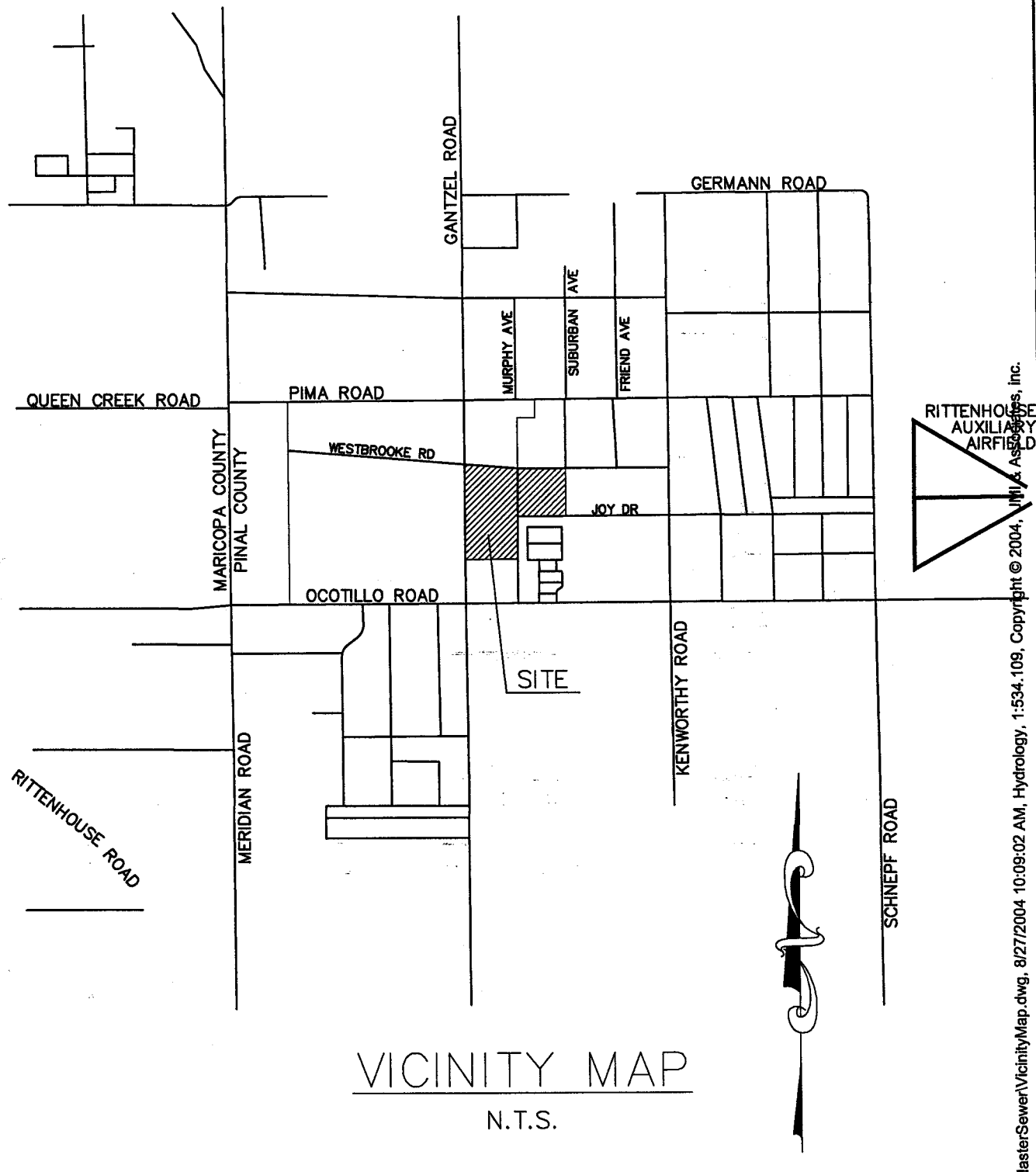
POPULATION	PEAKING FACTOR
100	3.62
200	3.14
300	2.90
400	2.74
500	2.64
600	2.56
700	2.50
800	2.46
900	2.42
1000	2.38
1500	2.28
2000	2.20
2500	2.15
3000	2.10
4000	2.02
5000	1.98
6000	1.93
7000	1.92
8000	1.89
9000	1.87
10000	1.85
15000	1.80
20000	1.74
25000	1.71
30000	1.69

5.0 SUMMARY

The master sewer collection system shown on the master sewer exhibit reflects the system designed for this study. The designed system will adequately convey the wastewater flow generated by the study area to the appropriate lift station, where it will be pumped to the nearest treatment facility.

When constructed in accordance with this report, Johnson Utilities, and Pinal County requirements, the system described by this study will serve the needs of the Taylor Ranch development. The detailed design of the future subdivisions and mixed use areas will follow this report and make any adjustments for site specific conditions as necessary, while conforming to the conditions described herein.

APPENDIX A
FIGURE 1 – VICINITY MAP



VICINITY MAP

N.T.S.

JMI & ASSOCIATES
CONSULTING CIVIL ENGINEERS
4151 NORTH MARSHALL WAY SUITE 12 SCOTTSDALE, AZ. 85251 480.945.1405

FIGURE 1:
VICINITY MAP
TAYLOR RANCH

APPENDIX B
MASTER WASTEWATER EXHIBIT

OVERSIZED
MAP

SEE
DOCKET
WS-02987A-04-0889
FOR ORIGINAL
MAP

APPENDIX C
LINE SIZE AND INVERT ANALYSIS

Line Size & Invert Analysis

Label	Upstream Node	Upstream Invert Elevation (ft)	Downstream Node	Down stream Invert Elevation (ft)	Section Size	Length (ft)	Bend Angle (degrees)	Slope (ft/ft)	Mannings n	Total Flow (gpd)	Full Capacity (gpd)	d/D Depth Rise (%)	Infiltration Additional Flow (gpd)	Total Wet Weather Flow (gpd)
P-1	MH-1	72.79	MH-2	71.73	12 inch	443.00	0.01	0.002393	0.013	34,948.15	1,126,328.05	10.8	966.67	966.67
P-2	MH-2	71.53	MH-3	69.99	12 inch	642.00	0.51	0.002399	0.013	44,249.89	1,127,734.01	12.1	966.67	1,933.33
P-3	MH-3	69.79	O-1	69.55	12 inch	101.00	0.00	0.002376	0.013	45,216.56	1,122,428.71	12.2	966.67	2,900.00
P-4	MH-5	79.01	MH-6	78.59	12 inch	190.00	21.04	0.002211	0.013	26,613.07	1,082,584.18	9.5	966.67	966.67
P-5	MH-6	78.49	MH-7	78.32	12 inch	75.00	68.99	0.002267	0.013	27,579.73	1,096,245.09	9.7	966.67	1,933.33
P-6	MH-7	78.12	MH-8	77.64	12 inch	220.00	13.09	0.002182	0.013	28,546.40	1,075,531.44	9.9	966.67	2,900.00
P-7	MH-8	77.54	MH-9	77.34	12 inch	90.00	9.38	0.002222	0.013	29,513.07	1,085,444.38	10.0	966.67	3,866.67
P-8	MH-9	77.24	MH-10	76.36	12 inch	400.00	0.70	0.002200	0.013	30,479.73	1,080,003.52	11.7	966.67	4,833.33
P-9	MH-10	76.36	MH-11	75.70	12 inch	300.00	20.46	0.002200	0.013	31,446.40	1,080,003.52	10.4	966.67	5,800.00
P-10	MH-11	75.60	MH-12	75.15	12 inch	205.00	1.35	0.002195	0.013	32,413.07	1,078,805.51	13.6	966.67	6,766.67
P-11	MH-12	75.15	MH-13	74.93	12 inch	100.00	12.68	0.002200	0.013	53,896.85	1,080,003.52	13.5	966.67	7,733.33
P-12	MH-13	74.83	MH-14	74.54	12 inch	130.00	6.68	0.002231	0.013	54,863.52	1,087,529.77	15.4	966.67	8,700.00
P-13	MH-14	74.54	MH-15	74.26	12 inch	126.00	90.00	0.002222	0.013	55,830.19	1,085,444.38	13.7	966.67	9,666.67
P-14	MH-15	74.06	MH-16	73.42	12 inch	290.00	27.03	0.002207	0.013	56,796.85	1,081,694.99	13.8	966.67	10,633.33
P-15	MH-16	73.32	MH-17	73.04	12 inch	125.00	15.07	0.002240	0.013	80,845.28	1,089,777.51	16.4	966.67	11,600.00
P-16	MH-17	72.94	MH-18	72.50	12 inch	200.00	79.98	0.002200	0.013	99,123.27	1,080,003.52	18.3	966.67	12,566.67
P-17	MH-18	72.30	MH-19	72.12	12 inch	80.00	22.79	0.002250	0.013	100,089.93	1,092,207.34	18.3	966.67	13,533.33
P-18	MH-19	72.02	MH-20	71.76	12 inch	120.00	28.65	0.002167	0.013	101,056.60	1,071,790.45	18.5	966.67	14,500.00
P-19	MH-20	71.66	MH-21	71.27	12 inch	178.00	90.00	0.002191	0.013	102,023.27	1,077,794.92	18.5	966.67	15,466.67
P-20	MH-21	71.07	MH-22	70.44	12 inch	285.00	1.08e-12	0.002211	0.013	133,765.61	1,082,584.18	23.8	966.67	16,433.33
P-21	MH-22	70.44	MH-23	69.97	12 inch	212.00	90.00	0.002217	0.013	134,732.28	1,084,163.62	21.3	966.67	17,400.00
P-22	MH-23	69.77	MH-24	69.55	12 inch	100.00	0.43	0.002200	0.013	135,698.95	1,080,003.52	27.4	966.67	18,366.67
P-23	MH-25	75.54	MH-26	74.07	8 inch	388.00	1.14e-13	0.003789	0.013	13,789.87	480,706.44	11.8	966.67	966.67
P-24	MH-26	74.07	MH-27	72.55	8 inch	400.00	2.1e-12	0.003800	0.013	14,756.53	481,425.33	12.2	966.67	1,933.33
P-25	MH-27	72.55	MH-28	72.19	8 inch	95.00	89.01	0.003789	0.013	15,723.20	480,758.08	11.5	966.67	2,900.00
P-26	MH-28	71.99	MH-29	71.35	12 inch	290.00	0.99	0.002207	0.013	143,129.07	1,081,694.99	25.4	966.67	3,866.67
P-27	MH-29	71.35	MH-30	70.69	12 inch	300.00	6.82e-13	0.002200	0.013	161,407.05	1,080,003.52	27.6	966.67	4,833.33
P-28	MH-30	70.69	MH-31	70.03	12 inch	300.00	35.02	0.002200	0.013	197,637.52	1,080,003.52	25.9	966.67	5,800.00
P-29	MH-31	69.93	MH-24	69.55	12 inch	174.00	55.41	0.002184	0.013	202,451.15	1,076,046.42	30.2	966.67	6,766.67
P-30	MH-24	69.55	O-2	69.55	12 inch	1.00	0.00	0.005000	0.013	339,116.76	1,628,166.57	30.4	966.67	26,100.00

APPENDIX D
MANHOLE SIZE AND INVERT ANALYSIS

Manhole Size & Invert Analysis

Label	Structure Diameter (ft)	Rim Elevation (ft)	Ground Elevation (ft)	Sump Elevation (ft)	Structure Depth (ft)	Hydraulic Grade Line In (ft)	Hydraulic Grade Line Out (ft)	Headloss Method	HEC-22 Benching Method	Sanitary Unit Load Type	Number Residences	Sanitary Base Load (gpd)	Total Flow (gpd)
MH-31	4.00	79.75	79.75	69.93	9.82	70.23	70.22	HEC-22 Energy	Half	JUResidence	6.00	1,404.00	201,484.48
MH-30	4.00	80.00	80.00	70.69	9.31	70.98	70.98	HEC-22 Energy	Half	JUResidence	55.00	12,870.00	196,670.85
MH-29	4.00	80.25	80.25	71.35	8.90	71.61	71.61	HEC-22 Energy	Half	JUResidence	27.00	6,318.00	160,440.39
MH-28	4.00	80.75	80.75	71.99	8.76	72.24	72.24	HEC-22 Energy	Half	<Composite>	N/A	44,580.00	142,162.40
MH-27	4.00	81.00	81.00	72.55	8.45	72.63	72.63	HEC-22 Energy	Half	<None>	N/A	0.00	14,756.53
MH-26	4.00	82.75	82.75	74.07	8.68	74.15	74.15	HEC-22 Energy	Half	<None>	N/A	0.00	13,789.87
MH-25	4.00	84.75	84.75	75.54	9.21	75.62	75.62	HEC-22 Energy	Half	JUResidence	20.00	4,680.00	12,823.20
MH-24	4.00	80.00	80.00	69.55	10.45	69.86	69.86	HEC-22 Energy	Half	<None>	N/A	0.00	338,150.09
MH-23	4.00	79.00	79.00	69.77	9.23	70.01	70.01	HEC-22 Energy	Half	<None>	N/A	0.00	134,732.28
MH-22	4.00	79.50	79.50	70.44	9.06	70.68	70.68	HEC-22 Energy	Half	<None>	N/A	0.00	133,765.61
MH-21	4.00	79.00	79.00	71.07	7.93	71.31	71.31	HEC-22 Energy	Half	JUResidence	48.00	11,232.00	132,798.95
MH-20	4.00	79.50	79.50	71.66	7.84	71.87	71.87	HEC-22 Energy	Half	<None>	N/A	0.00	101,056.60
MH-19	4.00	79.75	79.75	72.02	7.73	72.23	72.23	HEC-22 Energy	Half	<None>	N/A	0.00	100,089.93
MH-18	4.00	80.25	80.25	72.30	7.95	72.51	72.50	HEC-22 Energy	Half	<None>	N/A	0.00	99,123.27
MH-17	4.00	80.75	80.75	72.94	7.81	73.15	73.14	HEC-22 Energy	Half	JUResidence	27.00	6,318.00	98,156.60
MH-16	4.00	81.00	81.00	73.32	7.68	73.50	73.50	HEC-22 Energy	Half	JUResidence	36.00	8,424.00	79,878.61
MH-15	4.00	80.50	80.50	74.06	6.44	74.22	74.22	HEC-22 Energy	Half	<None>	N/A	0.00	55,830.19
MH-14	4.00	81.25	81.25	74.54	6.71	74.69	74.69	HEC-22 Energy	Half	<None>	N/A	0.00	54,863.52
MH-13	4.00	82.00	82.00	74.83	7.17	74.98	74.98	HEC-22 Energy	Half	<None>	N/A	0.00	53,896.85
MH-12	4.00	82.50	82.50	75.15	7.35	75.30	75.30	HEC-22 Energy	Half	JUResidence	32.00	7,488.00	52,930.19
MH-11	4.00	83.75	83.75	75.60	8.15	75.72	75.72	HEC-22 Energy	Half	<None>	N/A	0.00	31,446.40
MH-10	4.00	84.50	84.50	76.36	8.14	76.48	76.48	HEC-22 Energy	Half	<None>	N/A	0.00	30,479.73
MH-9	4.00	85.50	85.50	77.24	8.26	77.36	77.36	HEC-22 Energy	Half	<None>	N/A	0.00	29,513.07
MH-8	4.00	85.75	85.75	77.54	8.21	77.65	77.65	HEC-22 Energy	Half	<None>	N/A	0.00	28,546.40
MH-7	4.00	86.50	86.50	78.12	8.38	78.23	78.23	HEC-22 Energy	Half	<None>	N/A	0.00	27,579.73
MH-6	4.00	86.50	86.50	78.49	8.01	78.60	78.60	HEC-22 Energy	Half	<None>	N/A	0.00	26,613.07
MH-5	4.00	86.50	86.50	79.01	7.49	79.12	79.12	HEC-22 Energy	Half	JUResidence	40.00	9,360.00	25,646.40
MH-3	4.00	79.00	79.00	69.79	9.21	69.93	69.93	HEC-22 Energy	Half	<None>	N/A	0.00	44,249.89
MH-2	4.00	82.00	82.00	71.53	10.47	71.67	71.67	HEC-22 Energy	Half	JUResidence	13.00	3,042.00	43,283.23
MH-1	4.00	86.00	86.00	72.79	13.21	72.91	72.91	HEC-22 Energy	Half	JUResidence	53.00	12,402.00	33,981.48

APPENDIX E
LOADING SUMMARY

LOADING SUMMARY (RESIDENTIAL)					LOADING SUMMARY (SCHOOL/PARK)				WET WEATHER FLOW	
Manhole	Contributing D.U. Taylor Ranch	Flow Rate per D.U. (gpd)	Peaking Factor	Total Flow from D.U. (gpd)	Contributing Commercial Areas (acres)	Flow Rate per Acre (gpd)	Peaking Factor	Total Flow Commercial Areas (gpd)	Total Flow Wet Weather Flow Infiltration & Inflow (gpd)	TOTAL FLOW (gpd)
MH-31	6	234	2.74	3847	0	1000	3	0	966.67	4813.6
MH-30	55	234	2.74	35264	0	1000	3	0	966.67	36230.5
MH-29	27	234	2.74	17311	0	1000	3	0	966.67	18278.0
MH-28	120	234	2.74	76939	16.5	1000	3	49500	966.67	127405.9
MH-27	0	234	2.74	0	0	1000	3	0	966.67	966.7
MH-26	0	234	2.74	0	0	1000	3	0	966.67	966.7
MH-25	20	234	2.74	12823	0	1000	3	0	966.67	13789.9
MH-24	0	234	2.74	0	0	1000	3	0	966.67	966.7
MH-23	0	234	2.74	0	0	1000	3	0	966.67	966.7
MH-22	0	234	2.74	0	0	1000	3	0	966.67	966.7
MH-21	48	234	2.74	30776	0	1000	3	0	966.67	31742.3
MH-20	0	234	2.74	0	0	1000	3	0	966.67	966.7
MH-19	0	234	2.74	0	0	1000	3	0	966.67	966.7
MH-18	0	234	2.74	0	0	1000	3	0	966.67	966.7
MH-17	27	234	2.74	17311	0	1000	3	0	966.67	18278.0
MH-16	36	234	2.74	23082	0	1000	3	0	966.67	24048.4
MH-15	0	234	2.74	0	0	1000	3	0	966.67	966.7
MH-14	0	234	2.74	0	0	1000	3	0	966.67	966.7
MH-13	0	234	2.74	0	0	1000	3	0	966.67	966.7
MH-12	32	234	2.74	20517	0	1000	3	0	966.67	21483.8
MH-11	0	234	2.74	0	0	1000	3	0	966.67	966.7
MH-10	0	234	2.74	0	0	1000	3	0	966.67	966.7
MH-9	0	234	2.74	0	0	1000	3	0	966.67	966.7
MH-8	0	234	2.74	0	0	1000	3	0	966.67	966.7
MH-7	0	234	2.74	0	0	1000	3	0	966.67	966.7
MH-6	0	234	2.74	0	0	1000	3	0	966.67	966.7
MH-5	40	234	2.74	25646	0	1000	3	0	966.67	26613.1
MH-3	0	234	2.74	0	0	1000	3	0	966.67	966.7
MH-2	13	234	2.74	8335	0	1000	3	0	966.67	9301.7
MH-1	53	234	2.74	33981	0	1000	3	0	966.67	34948.1
TOTAL	477	234	2.74	**305833**	16.5	1000	3	**49500**	**29000**	**384333**

gpd = gallon per day
D.U. = Single Family Dwelling Units

TOTAL

LOADING SUMMARY (WET WEATHER FLOW INFILTRATION AND INFLOW)				
Pipe	**Infiltration Load Type**	**Total Service Area (acres)**	**Flow Rate (gpad)**	**Total Flow (gpd)**
TOTAL	Wet Weather Flow Infiltration & Inlow	116	250	**29000**

Pipe	Distribution (gpd)
P-30	966.67
P-29	966.67
P-28	966.67
P-27	966.67
P-26	966.67
P-25	966.67
P-24	966.67
P-23	966.67
P-22	966.67
P-21	966.67
P-20	966.67
P-19	966.67
P-18	966.67
P-17	966.67
P-16	966.67
P-15	966.67
P-14	966.67
P-13	966.67
P-12	966.67
P-11	966.67
P-10	966.67
P-9	966.67
P-8	966.67
P-7	966.67
P-6	966.67
P-5	966.67
P-4	966.67
P-3	966.67
P-2	966.67
P-1	966.67
TOTAL	**29000**

APPENDIX F
OUTLET REPORT

Scena_ : Base

Outlet Report

Label	Station (ft)	Ground Elevation (ft)	Set Rim Equal to Ground Elevation?	Rim Elevation (ft)	Sump Elevation (ft)	Tailwater Condition	Tailwater Elevation (ft)	Total Flow (gpd)	Description
O-1	0+00	78.90	true	78.90	69.55	Free Outfall		45,216.56	
O-2	0+00	80.00	true	80.00	69.55	Free Outfall		339,116.76	

TOTAL- 384,333.32

JMI & Associates
37 Brookside Road Waterbury, CT 06708 USA +1-203-755-1666

EXHIBIT 7

2003 ANNUAL REPORT

ARIZONA CORPORATION COMMISSION
UTILITIES DIVISION

ANNUAL REPORT MAILING LABEL – MAKE CHANGES AS NECESSARY

WS-02987A SEWER
JOHNSON UTILITIES LLC
5320 E SHEA BLVD
SCOTTSDALE, AZ 85254

ANNUAL REPORT

FOR YEAR ENDING

12	31	2003

FOR COMMISSION USE

COMPANY INFORMATION

Company Name (Business Name) JOHNSON UTILITIES, LLC

Mailing Address 5320 E. SHEA BLVD #200
(Street)

SCOTTSDALE (City) | AZ (State) | 85254 (Zip)

480-998-3300 (Telephone No. (Include Area Code)) | 480-483-7908 (Fax No. (Include Area Code)) | Pager/Cell No. (Include Area Code)

Email Address

Local Office Mailing Address SAME
(Street)

(City) | (State) | (Zip)

Local Office Telephone No. (Include Area Code) | Fax No. (Include Area Code) | Pager/Cell No. (Include Area Code)

Email Address

MANAGEMENT INFORMATION

Management Contact: GEORGE JOHNSON
(Name) (Title)

5320 E. SHEA BLVD #200 (Street) | SCOTTSDALE (City) | AZ (State) | 85254 (Zip)

480-998-3300 (Telephone No. (Include Area Code)) | 480-483-7908 (Fax No. (Include Area Code)) | Pager/Cell No. (Include Area Code)

Email Address

On Site Manager: BRIAN P TOMPSETT
(Name)

SAME (Street) | (City) | (State) | (Zip)

SAME (Telephone No. (Include Area Code)) | Fax No. (Include Area Code) | Pager/Cell No. (Include Area Code)

Email Address

Statutory Agent: RICHARD SALLQUIST
(Name)

2525 E. AZ BILTMORE CIR #117	PHOENIX	AZ	85016
(Street)	(City)	(State)	(Zip)

(602)224-9222		
Telephone No. (Include Area Code)	Fax No. (Include Area Code	Pager/Cell No. (Include Area Code)

Attorney: SAME
(Name)

(Street)	(City)	(State)	(Zip)

Telephone No. (Include Area Code)	Fax No. (Include Area Code)	Pager/Cell No. (Include Area Code)

OWNERSHIP INFORMATION

Check the following box that applies to your company:

- ☐ **Sole Proprietor (S)**
- ☐ **Partnership (P)**
- ☐ **Bankruptcy (B)**
- ☐ **Receivership (R)**
- ☐ **Other (Describe)**_____
- ☐ **C Corporation (C) (Other than Association/Co-op)**
- ☐ **Subchapter S Corporation (Z)**
- ☐ **Association/Co op (A)**
- **X Limited Liability Company**

COUNTIES SERVED

Check the box below for the county/ies in which you are certificated to provide service:

- ☐ **APACHE**
- ☐ **COCHISE**
- ☐ **COCONINO**
- ☐ **GILA**
- ☐ **GRAHAM**
- ☐ **GREENLEE**
- ☐ **LA PAZ**
- ☐ **MARICOPA**
- ☐ **MOHAVE**
- ☐ **NAVAJO**
- ☐ **PIMA**
- **X PINAL**
- ☐ **SANTA CRUZ**
- ☐ **YAVAPAI**
- ☐ **YUMA**
- ☐ **STATEWIDE**

COMPANY NAME
JOHNSON UTILITIES, LLC

UTILITY PLANT IN SERVICE

Acct. No.	DECRIPTION	Original Cost (OC)	Accumulated Depreciation (AD)	O.C.L.D. (OC less AD)
351	Organization			
352	Franchises			
353	Land and Land Rights	910,000		910,000
354	Structures and Improvements	453,663	38,181	415,482
355	Power Generation Equipment			
360	Collection Sewers - Force			
361	Collection Sewers - Gravity			
362	Special Collecting Structures			
363	Services to Customers			
364	Flow Measuring Devices			
365	Flow Measuring Installations			
370	Receiving Wells			
380	Treatment and Disposal Equip.			
381	Plant Sewers	17,432,240	1,007,341	16,424,899
382	Outfall Sewer Lines			
389	Other Plant and Misc. Equipment	5,455	68	5,387
390	Office Furniture and Equipment			
391	Transportation Equipment			
393	Tools, Shop and Garage Equip.			
394	Laboratory Equipment			
395	Power Operated Equipment			
398	Other Tangible Plant			
	TOTALS	18,801,358	1,045,590	17,755,768

This amount goes on the Balance Sheet Acct. No. 108

COMPANY NAME
JOHNSON UTILITIES, LLC

CALCULATION OF DEPRECIATION EXPENSE

Acct. No.	DESCRIPTION	Original Cost (1)	Depreciation Percentage (2)	Depreciation Expense (1x2)
351	Organization			
352	Franchises			
353	Land and Land Rights	910,000		
354	Structures and Improvements	453,663	2.5%	11,342
355	Power Generation Equipment			
360	Collection Sewers - Force			
361	Collection Sewers - Gravity			
362	Special Collecting Structures			
363	Services to Customers			
364	Flow Measuring Devices			
365	Flow Measuring Installations			
370	Receiving Wells			
380	Treatment and Disposal Equip.			
381	Plant Sewers	17,432,240	2.5%	368,911
382	Outfall Sewer Lines			
389	Other Plant and Misc. Equipment	5,455	1.25%	68
390	Office Furniture and Equipment			
391	Transportation Equipment			
393	Tools, Shop and Garage Equip.			
394	Laboratory Equipment			
395	Power Operated Equipment			
398	Other Tangible Plant			
	SUBTOTAL	18,801,358		380,321
	CIAC Amortization			(210,899)
	TOTALS	18,801,358		169,422

This amount goes on Comparative Statement of Income and Expense Acct. 403

ULLMANN
& COMPANY P.C.
Certified Public Accountants

To the Board of Directors of
The Sewer Division of Johnson Utilities, L.L.C.
Scottsdale, Arizona

We have compiled the balance sheets (as restated) of The Sewer Division of Johnson Utilities, L.L.C. as of December 31, 2003 and 2002, and the comparative statements of income and expenses (as restated) for the years then ended included in the accompanying prescribed form in accordance with Statements on Standards for Accounting and Review Services issued by the American Institute of Certified Public Accountants.

Our compilation was limited to presenting in the form prescribed by the Arizona Corporation Commission information that is the representation of management. We have not audited or reviewed the financial statements referred to above and, accordingly, do not express an opinion or any other form of assurance on them.

These financial statements are presented in accordance with the requirements of the Arizona Corporation Commission, which differ from generally accepted accounting principles. Accordingly, these financial statements are not designed for those who are not informed about such differences.

All other information contained in the accompanying prescribed form has not been audited, reviewed, or compiled by us and, accordingly, we assume no responsibility for that information.

Ullmann & Company

ULLMANN & COMPANY, P.C.
Certified Public Accountants

March 31, 2004

2400 East Arizona Biltmore Circle • Suite 1220 • Phoenix, Arizona 85016
Telephone: (602) 224-0166 • FAX: (602) 224-6062 • e-mail: CPA@ULLMANNCPA.com • www.ULLMANNCPA.com

COMPANY NAME
JOHNSON UTILITIES, LLC

BALANCE SHEET

Acct. No.	ASSETS	BALANCE AT BEGINNING OF TEST YEAR	BALANCE AT END OF YEAR
	CURRENT AND ACCRUED ASSETS		
131	Cash	$ 410,535	$ 164,235
132	Special Deposits		
135	Temporary Cash Investments		
141	Customer Accounts Receivable	136,735	354,247
146	Notes/Receivables from Associated Companies	49,743	9,120
151	Plant Material and Supplies		
162	Prepayments		3,041
174	Miscellaneous Current and Accrued Assets	117,842	132,848
	TOTAL CURRENT AND ACCRUED ASSETS	$ 714,855	$ 663,491
	FIXED ASSETS		
101	Utility Plant in Service	13,444,334	18,801,358
103	Property Held for Future Use		70,257
105	Construction Work in Progress		5,502,892
108	Accumulated Depreciation - Utility Plant	665,269	1,045,590
121	Non-Utility Property		
122	Accumulated Depreciation - Non Utility		
	TOTAL FIXED ASSETS	$ 12,779,065	$ 23,328,917
	TOTAL ASSETS	$ 13,493,920	$ 23,992,408

NOTE: Total Assets on this page should equal Total Liabilities and Capital on the following page.

COMPANY NAME
JOHNSON UTILITIES, LLC

BALANCE SHEET (CONTINUED)

Acct. No.	LIABILITIES	BALANCE AT BEGINNING OF TEST YEAR	BALANCE AT END OF YEAR
	CURRENT LIABILITES		
231	Accounts Payable	$ 583,407	$ 101,712
232	Notes Payable (Current Portion)		
234	Notes/Accounts Payable to Associated Companies	28,312	171,798
235	Customer Deposits		
236	Accrued Taxes	110,682	42,234
237	Accrued Interest	50,316	1,690
241	Miscellaneous Current and Accrued Liabilities		
	TOTAL CURRENT LIABILITIES	$ 772,717	$ 317,434
	LONG-TERM DEBT (Over 12 Months)		
224	Long-Term Notes and Bonds	$ 236,585	$ 220,280
	DEFERRED CREDITS		
252	Advances in Aid of Construction	$ 5,433,041	$ 10,242,183
253	Other Deferred Credits		
255	Accumulated Deferred Investment Tax Credits		
271	Contributions in Aid of Construction	5,208,322	11,663,622
272	Less: Amortization of Contributions	167,479	378,378
281	Accumulated Deferred Income Tax		
	TOTAL DEFERRED CREDITS	$ 10,473,884	$ 21,527,427
	TOTAL LIABILITIES	$ 11,483,186	$ 22,065,141
	CAPITAL ACCOUNTS		
201	Common Stock Issued	$ -	$ -
211	Other Paid in Capital		
215	Retained Earnings		
218	Proprietary Capital (Sole Props and Partnerships)	2,010,734	1,927,267
	TOTAL CAPITAL	$ 2,010,734	$ 1,927,267
	TOTAL LIABILITIES AND CAPITAL	$ 13,493,920	$ 23,992,408

COMPANY NAME
JOHNSON UTILITIES, LLC

COMPARATIVE STATEMENT OF INCOME AND EXPENSE

	OPERATING REVENUES	PRIOR YEAR	TEST YEAR
521	Flat Rate Revenues	$ 576,672	$ 1,237,464
522	Measured Revenues		
536	Other Wastewater Revenues	39,700	
	TOTAL REVENUES	$ 616,372	$ 1,237,464
	OPERATING EXPENSES		
701	Salaries and Wages	$ -	$ -
710	Purchased Wastewater Treatment		
711	Sludge Removal Expense	851	2,685
715	Purchased Power	67,036	69,935
716	Fuel for Power Production		
718	Chemicals	661	
720	Materials and Supplies	8,400	2,904
731	Contractual Services - Professional	177,894	288,797
735	Contractual Services - Testing		
736	Contractual Services - Other		
740	Rents		28,236
750	Transportation Expense		134
755	Insurance Expense		6,951
765	Regulatory Commission Expense		
775	Miscellaneous Expense	3,911	9,994
403	Depreciation Expense	192,300	16,422
408	Taxes Other Than Income		501
408.11	Property Taxes	30,692	17,215
409	Income Taxes		
	TOTAL OPERATING EXPENSES	$ 481,745	$ 443,774
	OTHER INCOME/EXPENSE		
419	Interest and Dividend Income	$ 3,492	$ 4,479
421	Non-Utility Income		
426	Miscellaneous Non-Utility Expenses		
427	Interest Expense	29,502	19,011
	TOTAL OTHER INCOME/EXP	$ (26,010)	$ (14,532)
	NET INCOME/(LOSS)	$ 108,617	$ 779,158

COMPANY NAME JOHNSON UTILITIES, LLC

SUPPLEMENTAL FINANCIAL DATA

Long-Term Debt

	LOAN #1	LOAN #2	LOAN #3	LOAN #4
Date Issued	Various	4/9/03		
Source of Loan	Member	Grissom		
ACC Decision No.				
Reason for Loan	Capital Impr.	Land Purchase		
Dollar Amount Issued	$233,280	$35,000	$	$
Amount Outstanding	$185,280	$35,000	$	$
Date of Maturity	Demand	4/15/05		
Interest Rate	8%	8%	%	%
Current Year Interest	$18,589	$0	$	$
Current Year Principle	$48,000	$0	$	$

COMPANY NAME	JOHNSON UTILITIES, LLC

WASTEWATER COMPANY PLANT DESCRIPTION

TREATMENT FACILITY

TYPE OF TREATMENT (Extended Aeration, Step Aeration, Oxidation Ditch, Aerobic Lagoon, Anaerobic Lagoon, Trickling Filter, Septic Tank, Wetland, Etc.)	EXTENDED AERATION, AEROBIC LAGOONS
DESIGN CAPACITY OF PLANT (Gallons Per Day)	1.6 MGD

LIFT STATION FACILITIES

Location	Quantity of Pumps	Horsepower Per Pump	Capacity Per Pump (GPM)	Wet Well Capacity (gals)
MAIN PUMP STATION	2	30	325	7500
REUSE PUMP STATION	2	30	420	1879
UNIT 4A PUMP	2	75	400	380
UNIT 4D/4F PUMP STATION	2	18	656	1184
UNIT 6 PUMP STATION	2	3	100	440
OASIS @ MAGIC RANCH PUMP STATION	2	7.5	593	887
SUPERSTITION VIEWS	2	7.5	90	440
OASIS SUNRISE	2	15	500	2162
SAN TAN PUMP STATION	2	75	500	7500
COPPER BASIN PUMP STATION	2	30	380	7780
CIRCLE CROSS PUMP STATION	2	50	500	2256
PECAN RANCH PUMP STATION	2	75	500	2162
AD & AF	2	45	440	1879
COPPER BASIN #2	2	88	500	1879
RANCHO BELLA VISTA	2	47	500	1879
RANCHO BELLA VISTA #2	2	45	500	1879

FORCE MAINS

Size	Material	Length (Feet)
4-inch	PVC	2,704
6-inch	PVC	6,610
8-inch	PVC	100,042
15-inch	PVC	1,126
12-inch	PVC	4,770
10-inch	PVC	1,973

MANHOLES

Type	Quantity
Standard	1183
Drop	5

CLEANOUTS

Quantity
256

COMPANY NAME	JOHNSON UTILITIES, LLC

WASTEWATER COMPANY PLANT DESCRIPTION CONTINUED

COLLECTION MAINS

Size (in inches)	Material	Length (in feet)
4		
6		9467
8		251061
10		19309
12		22620
15		1126
18		2800
21		
24		
30		

SERVICES

Size (in inches)	Material	Quantity
4		6006
6		2
8		
12		
15		

FOR THE FOLLOWING FIVE ITEMS, LIST THE UTILITY OWNED ASSETS IN EACH CATEGORY

SOLIDS PROCESSING AND HANDLING FACILITIES	NONE
DISINFECTION EQUIPMENT (Chlorinator, Ultra-Violet, Etc.)	6 CHLORINATORS
FILTRATION EQUIPMENT (Rapid Sand, Slow Sand, Activated Carbon, Etc.)	NONE
STRUCTURES (Buildings, Fences, Etc.)	FENCES – 12 WELL SITES, 6 WATER PLANTS, 11 LIFT STATIONS. 1 WWTP.
OTHER (Laboratory Equipment, Tools, Vehicles, Standby Power Generators, Etc.	3 GENERATORS, 1 BACKHOE, 1 BULL DOZER

COMPANY NAME	JOHNSON UTILITIES, LLC

WASTEWATER FLOWS

MONTH/YEAR (Most Recent 12 Months)	NUMBER OF SERVICES	TOTAL MONTHLY SEWAGE FLOW	SEWAGE FLOW ON PEAK DAY
January 2003	1769	4,528,000	160,000
February 2003	1900	4,645,000	167,000
March 2003	2054	4,977,000	196,000
April 2003	2226	4,655,000	170,000
May 2003	2384	4,908,000	196,000
June 2003	2595	5,262,000	192,000
July 2003	2699	5,806,000	195,000
August 2003	2960	10,200,000	350,000
September 2003	3140	10,717,000	360,000
October 2003	3400	11,408,000	408,000
November 2003	3461	11,526,000	603,000
December 2003	3719	12,199,000	597,000

PROVIDE THE FOLLOWING INFORMATION AS APPLICABLE

Method Of Effluent Disposal (leach field, surface water discharge, reuse, injection wells, groundwater recharge, evaporation ponds, etc.)	Recharge Evaporation
Wastewater Inventory Number (all wastewater systems are assigned an inventory number)	103081
Groundwater Permit Number	58-106857.0005, 58-113322.0004
ADEQ Aquifer Protection Permit Number	P103081
ADEQ Reuse Permit Number	R103081
EPA NPDES Permit Number	N/A

STATISTICAL INFORMATION

Total number of customers 3719

Total number of gallons treated 90,831,000 gallons

JOHNSON UTILITIES COMPANY
PLANT INVENTORY
WASTEWATER

BACKBONE MAINS

Project	18" Mains	15" Mains	12" Mains	10" Mains	8" Main	6" Main	8" F/M	6" F.M	4 " F/M	Total Mains	4' M.H.	5' M.H.	C.O	30" Siv
Main Pump Station							25,500							
Main WWTP		990	1,120		605	1,870	3,300				4		2	
JR Trunk Sewer		136	3,650								13			
4A Station						4 880							a	
San Tan Force Lift Sta & Force Mn							16,477				3			
Section 11 Reuse							6,750							
Sec 11 WWTP					510	60								285
Pecan Ranch Pump Sta & Force Mn							29,200				2			
Superstition Views Pump Sta & F. M.					22				298					
Circle Cross Pump Sta and force Mn							5,104							
Copper Basin Pump Sta and force Mn							3,071							
Oasis at Magic Pump sta &Force Mn							5793							
Oasis Sunrise Pump Sta & Force Mn							2907							
4D/4F Pump Station & Force Main									1349					
JR Unit 29 pump sta and Force Main				1973										
Total	-	1,126	4,770	1,973	1,137	6,810	100,042	-	1,647	-	22	-	11	285
									Miles	0.00				

JOHNSON UTILITIES COMPANY
PLANT INVENTORY
WASTEWATER

TREATMENT PLANTS

	Name	GPD	Lot Size				Deeded to JUC?	Tax Parcel
	Johnson Ranch Main WWTP	1.6M	87 Acres				Gen Hunt	200-24-003D5 (?? 287 Ac ??)
	Precision	.3M	37 AC				[illegible]	[illegible]
	Marwood	Retired	N/A					

LIFT STATIONS

	Name	Location	Number Pumps	Horsepower	GPM each	Wet Well Capacity	Deeded to JUC?	Tax Parcel
	Main Station	Water Plant #1	2	30	325	7500		
	Station4A	JR Unit 4	2	7.5	156	380		
	Station 6	JR Unit 6	2	3	100	440		
	San Tan Station	San Tan Unit XX	2	25	500	7500		
	Pecan Station	Pecan RanchUnit XX	2	75	500	1879		
	Reuse Station	Main WWTP	2	30	420			
	Superstation Views	Superstition Views	2	7.5	90	440		
	4D/4F	JR Unit 4D/4F	2	3				
	Copper Basin	Copper Basin Devel	2	30	380	1688		
	Copper Basin	Copper Basin Devel	2	88	380	3750		
	Circle Cross	Cicle Cross Devel	2	50	500	1879		
	Magic Ranch Phase 1	Magic Ranch Phase 1	2	7.5	593			
	Oasis Sunrise	Oasis Sunrise Devel	2	15	500	1879		
	Morning Sun Farms	Morning Sun Farms	2	47				

JOHNSON UTILITY COMPANY PLANT INVENTORY ^WASTEWATER

ON-SITE MAINS

Subdivision	18" Mains	16" Mains	12" Mains	10" Mains	8" DIP	8" Mains	6" Mains	4" Main	Tot. Mns	4' M.H.	5' M.H.	C.O.	30" Slv
JR Unit 1			1,200			5,135				28		6	
JR Unit 2			465			4,120				18			
JR Unit 3A			2,484			4,035				20			
JR Unit 3B			710			1,996				8		1	
JR Unit 4A						9,283				35		9	
JR Unit 4B						5,839	839			19		6	
JR Unit 6						3,559	551			11	1	3	
JR Unit 7			1,035			6,447	1,041			55		10	
JR Unit 8			1,034			4,800	765			22		6	
JR Unit 12			1,212			8,370	1,092			35		10	
JR Unit 13						8,887	706			33		6	
Lakeview Gardens						2,273				14			
JR Units 4D & F						14,416	1,708			47	18	13	
JR Unit 15						[illegible]				[illegible]	[illegible]	[illegible]	
JR Unit 18 1,2,3			61	45		5,146				21	5		
JR Unit 14/52 1,2					1,935	8,378				25	13	6	
JR Unit 20/21						7,544				38	8	5	
JR Unit 22A						3,327				13			
JR Unit 22B						5,025				16			
JR Unit 23A						3,982				15	1		
JR Unit 29					137	2,839				13	10	3	
JR Unit 35 & 36						5,075				14	8	5	
JR Unit 41 & 47						3,400				20			
JR Unit 40A, 48 & 48						4,500				20			
JR Unit 34						2,546				7		1	
JR Golf Course													
San Tan OS Mn Parcels A & B	1,220		620	1,640		8,543				10	21		
San Tan Parcel A					160	3,760				9	4	15	
San Tan Parcel B					180	4,220				14		2	
SanTan OS Mn Parcels C,D, & E	1,580					1,140				15		2	
San Tan Parcel C					133	4,386				11	5	16	
San Tan Parcel D					105	3,400				10	1	11	
San Tan Parcel E					242	4,207				17		17	
San Tan Parcel F				920		2,120	270			9			
San Tan Parcel I						4,840				9	4		
San Tan Parcel J						4,900				9	8		
San Tan Parcel K						4,360				9	4		
San Tan Parcel L						4,484				21			
Johnson Holdings/Tosco						634				3			
Circle Cross Parcel 2			159	1,412		2,344				10	1		
Circle Cross Parcel 3			361	2,554		3,708				26	1		
Circle Cross Parcel 5			155			2,769				14	1		
Circle Cross Parcel 6				2,615		3,500				18			
Circle Cross Parcel 1			1,471	915		2,914				11	5	1	
Circle Cross Parcel 2			202	3,007		1,858				17	1	3	
Circle Cross Parcel 4			361	2,211		4,489				19	8	3	
Circle Cross Parcel 5			206			3,802				15	1	-	
Copper Basin Unit 2						3,775				19			
Oasis at Magic Ranch				1,469	326	7,704				22	5		
Oasis Sunrise				362		5,485	689			28	-	6	
Mirage at Magic				1,829	3,548					22			
School			728							1			
Circle Cross Coll Rd			1,752	340		749				7	3	7	
Morning Sun Farms MC						841				4	1		
Morning Sun Farms Ph 1	280				46	13,584				45	25		2
Trunk Sewer		167	3,634							13			
Superstition Views						1,890	2,006			6	4	16	
Total	3,080	167	17,850	19,309	6,790	251,061	9,467	-	-	1,044	170	194	2

COMPANY NAME JOHNSON UTILITIES, LLC YEAR ENDING 12/31/2003

INCOME TAXES

For this reporting period, provide the following:

Federal Taxable Income Reported	N/A (LLC)
Estimated or Actual Federal Tax Liability	N/A (LLC)
State Taxable Income Reported	N/A (LLC)
Estimated or Actual State Tax Liability	N/A (LLC)

Amount of Grossed-Up Contributions/Advances:

Amount of Contributions/Advances	0
Amount of Gross-Up Tax Collected	0
Total Grossed-Up Contributions/Advances	0

Decision No. 55774 states, in part, that the utility will refund any excess gross-up funds collected at the close of the tax year when tax returns are completed. Pursuant to this Decision, if gross-up tax refunds are due to any Payer or if any gross-up tax refunds have already been made, attach the following information by Payer: name and amount of contribution/advance, the amount of gross-up tax collected, the amount of refund due to each Payer, and the date the Utility expects to make or has made the refund to the Payer.

CERTIFICATION

The undersigned hereby certifies that the Utility has refunded to Payers all gross-up tax refunds reported in the prior year's annual report. This certification is to be signed by the President or Chief Executive Officer, if a corporation; the managing general partner, if a partnership; the managing member, if a limited liability company or the sole proprietor, if a sole proprietorship.

SIGNATURE	4.15.2004 DATE
GEORGE H. JOHNSON PRINTED NAME	MANAGER TITLE

COMPANY NAME JOHNSON UTILITIES, LLC **YEAR ENDING 12/31/2003**

PROPERTY TAXES

Amount of actual property taxes paid during Calendar Year 2003 was: $ 251,456

Attach to this annual report proof (e.g. property tax bills stamped "paid in full" or copies of cancelled checks for property tax payments) of any and all property taxes paid during the calendar year.

If no property taxes paid, explain why.

VERIFICATION
AND
SWORN STATEMENT
Intrastate Revenues Only

VERIFICATION

STATE OF ARIZONA

I, THE UNDERSIGNED

OF THE

COUNTY OF (COUNTY NAME) MARICOPA
NAME (OWNER OR OFFICIAL) TITLE GEORGE H. JOHNSON
COMPANY NAME JOHNSON UTILITIES L.L.C. - SEWER DIVISION

DO SAY THAT THIS ANNUAL UTILITY REPORT TO THE ARIZONA COPRORATION COMMISSION

FOR THE YEAR ENDING

MONTH	DAY	YEAR
12	31	2003

HAS BEEN PREPARED UNDER MY DIRECTION, FROM THE ORIGINAL BOOKS, PAPERS AND RECORDS OF SAID UTILITY; THAT I HAVE CAREFULLY EXAMINED THE SAME, AND DECLARE THE SAME TO BE A COMPLETE AND CORRECT STATEMENT OF BUSINESS AND AFFAIRS OF SAID UTILITY FOR THE PERIOD COVERED BY THIS REPORT IN RESPECT TO EACH AND EVERY MATTER AND THING SET FORTH, TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF.

SWORN STATEMENT

IN ACCORDANCE WITH THE REQUIREMENT OF TITLE 40, ARTICLE 8, SECTION 40-401, ARIZONA REVISED STATUTES, IT IS HEREIN REPORTED THAT THE GROSS OPERATING REVENUE OF SAID UTILITY DERIVED FROM ARIZONA INTRASTATE UTILITY OPERATIONS DURING CALENDAR YEAR 2003 WAS:

Arizona IntraState Gross Operating Revenues Only ($)
$ 1,324,012

(THE AMOUNT IN BOX ABOVE INCLUDES $ 86,548 IN SALES TAXES BILLED, OR COLLECTED

**REVENUE REPORTED ON THIS PAGE MUST INCLUDE SALES TAXES BILLED OR COLLECTED. IF FOR ANY OTHER REASON, THE REVENUE REPORTED ABOVE DOES NOT AGREE WITH TOTAL OPERATING REVENUES ELSEWHERE REPORTED , ATTACH THOSE STATEMENTS THAT RECONCILE THE DIFFERENCE. (EXPLAIN IN DETAIL)

SIGNATURE OF OWNER OR OFFICIAL

(480) 998-3300
TELEPHONE NUMBER

SUBSCRIBED AND SWORN TO BEFORE ME

A NOTARY PUBLIC IN AND FOR THE COUNTY OF

COUNTY NAME	
MARICOPA	
MONTH APRIL	2004

THIS [illegible] DAY OF

NANCEE P. IRWIN
NOTARY PUBLIC - ARIZONA
MARICOPA COUNTY
My Comm. Expires 5-29-2005
OFFICIAL SEAL
(SEAL)

Nancee P. Irwin
SIGNATURE OF NOTARY PUBLIC

MY COMMISSION EXPIRES May 20, 2005

VERIFICATION
AND
SWORN STATEMENT
RESIDENTIAL REVENUE
INTRASTATE REVENUES ONLY

VERIFICATION

STATE OF ARIZONA

I, THE UNDERSIGNED

OF THE

(COUNTY NAME) MARICOPA		
NAME (OWNER OR OFFICIAL) GEORGE H. JOHNSON		TITLE PRESIDENT
COMPANY NAME JOHNSON UTILITIES L.L.C. – SEWER DIVISION		

DO SAY THAT THIS ANNUAL UTILITY REPORT TO THE ARIZONA CORPORATION COMMISSION

FOR THE YEAR ENDING

MONTH	DAY	YEAR
12	31	2003

HAS BEEN PREPARED UNDER MY DIRECTION, FROM THE ORIGINAL BOOKS, PAPERS AND RECORDS OF SAID UTILITY; THAT I HAVE CAREFULLY EXAMINED THE SAME, AND DECLARE THE SAME TO BE A COMPLETE AND CORRECT STATEMENT OF BUSINESS AND AFFAIRS OF SAID UTILITY FOR THE PERIOD COVERED BY THIS REPORT IN RESPECT TO EACH AND EVERY MATTER AND THING SET FORTH, TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF.

SWORN STATEMENT

IN ACCORDANCE WITH THE REQUIREMENTS OF TITLE 40, ARTICLE 8, SECTION 40-401.01, ARIZONA REVISED STATUTES, IT IS HEREIN REPORTED THAT THE GROSS OPERATING REVENUE OF SAID UTILITY DERIVED FROM ARIZONA INTRASTATE UTILITY OPERATIONS RECEIVED FROM RESIDENTIAL CUSTOMERS DURING CALENDAR YEAR 2003 WAS:

ARIZONA INTRASTATE GROSS OPERATING REVENUES
$ 1,312,740

(THE AMOUNT IN BOX AT LEFT INCLUDES $ 85,811 IN SALES TAXES BILLED, OR COLLECTED

***RESIDENTIAL REVENUE REPORTED ON THIS PAGE MUST INCLUDE SALES TAXES BILLED.**

X

SIGNATURE OF OWNER OR OFFICIAL

SUBSCRIBED AND SWORN TO BEFORE ME

A NOTARY PUBLIC IN AND FOR THE COUNTY OF

THIS 15th **DAY OF**

NOTARY PUBLIC NAME NANCEE P. IRWIN	
COUNTY NAME MARICOPA	
MONTH April	20 04

OFFICIAL SEAL
NANCEE P. IRWIN
NOTARY PUBLIC – ARIZONA
MARICOPA COUNTY
My Comm. Expires 5-20-2005

(SEAL)

X

SIGNATURE OF NOTARY PUBLIC

MY COMMISSION EXPIRES

May 20, 2005

EXHIBIT 8

APPROVAL OF CONSTRUCTION VINEYARD ESTATES

Janet Napolitano
Governor

ARIZONA DEPARTMENT
OF
ENVIRONMENTAL QUALITY

1110 W. Washington Street Phoenix, Arizona 85007

APPROVAL OF CONSTRUCTION

Project Description: Construction of water distribution lines to serve 161 lots of Vineyard Estates Subdivision.

Location: Pinal

Project Owner: Vineyard Estates, LLC
Address: 16009 N. 81st St. #200
Scottsdale, AZ 85260

The Arizona Department of Environmental Quality (ADEQ) hereby issues an Approval of Construction for the above-described facility based on the following provisions of Arizona Administrative Code (A.A.C.) R18-4-507 et seq.

On April 10, 2003, ADEQ issued a Certificate of Approval to Construct for the referenced project.

On April 27, 2004, Ronald L. Smith, P.E., certified the following:

- a final construction inspection was conducted on December 15, 2003;
- the referenced project was constructed according to the as-built plans and specifications and ADEQ's Certificate of Approval to Construct;
- water system pressure and leakage tests were conducted on December 15, 2003, and the results were within the allowable leakage rates; and
- the water distribution system was disinfected December 12, 2003, according to an ADEQ-approved method.

Microbiological samples were collected on December 16, 2003 and analyzed on December 17, 2003, by Aquatic Consulting & Testing, Inc., ADHS License No. AZ0003. The sample results were negative for total coliform.

This Approval of Construction authorizes the owner to begin operating the above-described facilities as represented in the approved plan on file with the ADEQ. Be advised that A.A.C. R18-4-124 requires the owner of a public water system to maintain and operate all water production, treatment and distribution facilities in accordance with ADEQ Safe Drinking Water Rules.

AH:RK1

PWS No.: 11-060

ADEQ Project No.: 20030155
LTF No.: 32972

FOR Susan Hazelett
Aolad Hossain, P.E., Manager
Technical Engineering Unit
Drinking Water Section

5/27/04
Date Approved

c: DWCEU Facility File
TEU Construction File
CRO Approval of Construction File
Pinal County Health Department
Pinal County Planning & Zoning Department
AZ Corporation Commission
Engineer: (Ronald L. Smith, P.E. 16009 N. 81st St., Ste 200 Scottsdale, AZ 85260